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THE JOURNAL

OF THE

American Medical Association

Annual Subscription, $5.00 | PUBLISHED WEEKLY | Single Copies, 15 Cents

VOLUME 70, No. 1 | 535 North Dearborn Street, CHICAGO, ILL. | JANUARY 5, 1918

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ENTERED AS SECOND-CLASS MATTER, JUNE 25, 1885, AT THE POSTOFFICE AT CHICAGO, ILLINOIS, UNDER ACT OF MARCH 3, 1879.
NEXT ANNUAL SESSION, CHICAGO, JUNE 10-14, 1918.
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SAUNDERS

Bulletin

KANSAS

The physicians of Kansas will be interested in knowing that, beginning with January, the Saunders announcements will appear monthly on the front cover of their State Society Journal.

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The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 70, No. 1 CHICAGO, ILLINOIS JANUARY 5, 1918

RECURRENT OR HABITUAL DISLOCATION OF THE SHOULDER*

M. S. HENDERSON, M.D.

ROCHESTER, MINN.

Dislocations occur more frequently in the shoulder joint than in any other joint in the body. Reduction is, as a rule, readily accomplished, but if delayed beyond a few hours, is not easy. If deferred for days, it is quite difficult, and a delay of more than a week may mean that all attempts at reduction will fail. If the dislocation is associated with a fracture of the surgical neck of the humerus, unless reduction is accomplished by an open operation, the patient usually comes to a resection of the head of the bone later.

Habitual dislocations of the shoulder joint occur in cases in which reduction has been accomplished and the convalescence completed without incident, so that there is no cause for anxiety. The habit of easy dislocation is a sequela that cannot be foretold. A shoulder joint may be said to be subject to habitual or recurrent dislocations when they occur irregularly as the result of some trivial voluntary manipulation or effort on the part of the patient.

The shoulder joint is a true ball-and-socket joint. The depth of the socket is so slight and the amount of the head of the bone in actual contact with the glenoid fossa so small that it is a wonder dislocations of the shoulder are not much more common. The socket is formed by the glenoid fossa of the scapula and its cartilaginous rim. The capsule itself is quite lax, the shoulder owing its stability to the muscular arrangement. It is reinforced at certain points by the insertion of muscles into and through it, to the bone beneath. When the shoulder girdle is paralyzed and the muscle tone gone, as in anterior poliomyelitis, or trauma to the brachial plexus, we see the lax dislocated shoulder which cannot be kept in place. The long head of the biceps originates from the upper margin of the glenoid fossa, and crosses the cavity of the shoulder joint anteriorly, surrounded by synovium (Fig. 1). Its action in this situation serves to strengthen the joint and prevent dislocations through this part of the capsule. Over the whole is the strong fan-shaped deltoid, which by its action tends to hold the head of the humerus in the glenoid fossa. The supraspinatus, infraspinatus and teres minor inserted into the greater tuberosity of the humerus thicken and strengthen the capsule above and behind and by their action tend to hold the head of the humerus in place (Fig. 2). Into the lesser tuberosity of the humerus the subscapularis tendon is inserted in front and into the inner side of the bicipital groove, serving to strengthen the anterior part of the capsule (Fig. 3). At the lower margin of the glenoid fossa arises a part of the triceps, in no way reinforcing the capsule, and between this point below and the point of insertion of the subscapularis above, there is no muscular insertion on the anterior portion of the capsule. This area is the weak part of the capsule, being the place in which dislocations usually occur (Fig. 4).

Definite evidence of the pathologic condition is lacking. The limited opportunity for examination of the entire field at the time of operation accounts for much of the difference of opinion. In 1880, Joessel[1] gave it as his opinion that the dislocation was the result of a tear in the capsule at the attachment of the supraspinatus and infraspinatus and the teres minor. Such a rent, he contended, would allow the arm to drop down and luxate through the lax portion of the capsule between the insertion of the subscapularis above and the origin of the triceps below, without necessarily tearing this lax portion. Thomas does not agree with this view, asserting that, in his opinion, the rent usually occurs in the anterior inferior portion and that there is no damage to the capsule in the region of the greater tuberosity. In none of the cases in this series has there been any evidence of rupture of the supraspinatus and infraspinatus tendons and damage to the capsule. It might be supposed that a rupture of these tendons would tend to detach some of the periosteal cells from the greater tuberosity, and that the callus thus formed would cast shadows on the plate; but the roentgenograms in every case in this series were negative. Also the curative value of a capsulorrhaphy of the anterior inferior portion of the capsule would further substantiate the theory that this is the point of exit for the dislocating head. Other authorities, such as Loebker, suggest some abnormality or defect in the head of the humerus, but their proof for such a condition is not very convincing.

There is always a history of a traumatic dislocation. The second dislocation may occur a few weeks or few months after the first, and those that follow gradually become more frequent. The motion producing luxation is one with the arm in abduction and a little forward. The position causes the greater part of the humeral head to be pressed against the weak part of the capsule, and at the same time relaxes the biceps tendon as it runs in the bicipital groove. The dislocations may occur so often that the patient or his friends under his direction may make the reduction.

* From the Mayo Clinic.

* Read before the Southeastern Medical Society of Iowa, Fairfield, Iowa, Oct. 18, 1917.

1. Joessel, J. G.: Ueber die Recidive der Humerusluxationen, Deutsch. Ztschr. f. Chir., 1880, **13**, 167-184.

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The number of dislocations and the degree of disability vary in individual cases. One patient in the series had experienced more than a hundred dislocations. As might be expected, dislocations are more common in the male than in the female, the proportion in this group being seven males to one female. They are found in the young and the middle aged, and are by no means unknown in the aged. Epileptics are subject to them. The disability due to the uncertainty and irregularity of the attacks may be so extreme that the patients are unable to earn a livelihood. It is generally stated that recurring dislocations are caused by insufficient fixation following the original luxation. This is probably true, but the fact remains that when the ordinary dislocation is reduced and the patient is allowed to go about his usual duties in a few days, subsequent dislocations rarely occur. To safeguard our patients against this disagreeable sequela, the arm should be carried in a sling for ten days, and abduction of the shoulder absolutely prohibited for one month following the accident.

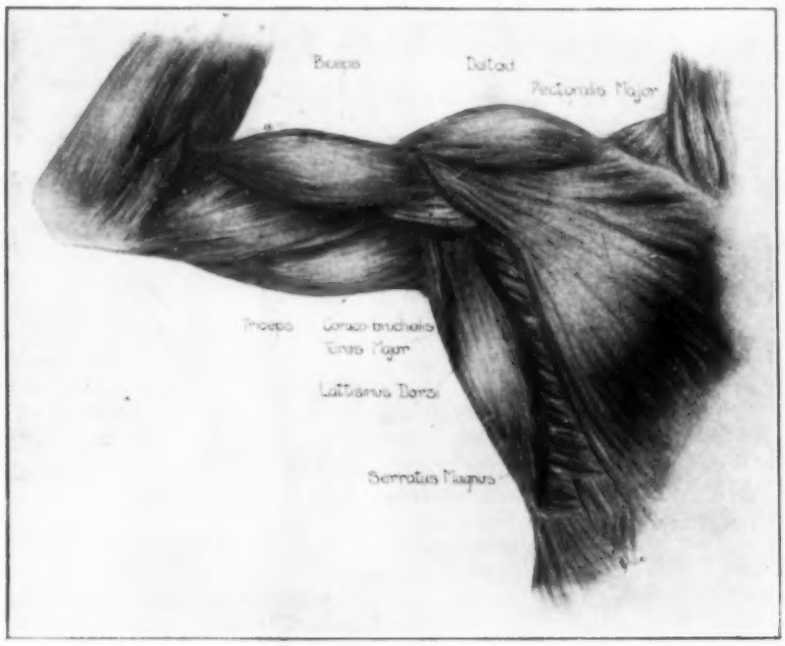

Fig. 1.—Anterior view, showing muscular arrangement about the shoulder.

As braces and appliances are cumbersome, and seldom successful in the treatment, there remain only surgical measures. In the past, extreme measures have been undertaken to relieve the condition.

Resection of the head of the humerus has been done by some surgeons, notably Cramer, Kuester, Kraske, Popke, Volkmann, Schueller, Staffer, Mueller and Francke. Such a procedure is mentioned only to be condemned. Albert[2] prevented the recurrences in his cases by producing a bony ankylosis; and while this seems somewhat extreme, it might readily be advised if milder measures failed. An ankylosis of the shoulder joint produced with the humerus at a right angle to the body gives a very useful arm, as has been shown in cases of infantile paralysis in which such operation has been performed because of paralysis of the deltoid. The scapular vertebral muscles acting on the scapula are used to abduct the arm. It has been found that, by merely incising the capsule at the anterior inferior angle and overlapping it, by the process of capsulorrhaphy, the dislocations are prevented. Gerster[3] in 1883 was the first to do this. Bardenheuer did the same in 1886, and Ricard in 1892. More recently, Thomas[4] has reported cases in which cure has been effected by capsulorrhaphy. Young has outlined a method, basing his operation on the fulcrum action of the pectoralis major and the latissimus dorsi. The operation consists in the severing of the lower portions of these muscles at the point at which they are inserted into the lips of the bicipital groove.

To expose the capsule of the joint for capsulorrhaphy, an incision is made which runs along the anterior fold of the axilla while the arm is held in abduction. The pectoralis major muscle is strongly retracted, and the dissection is carried down to the capsule below the tendon of the subscapularis. An incision is made into the capsule, and three or four mattress sutures of No. 2 chromic catgut doubled are inserted (Fig. 5). It will be found that the overlapping of the capsule may be secured readily by rotating the arm. The sutures are placed in the weak, lax part of the capsule at the inferior anterior portion. The wound is closed, the arm is held strapped to the side of the body for two weeks, and abduction to a right angle is not permitted for six weeks.

The plastic operation of Young is accomplished by an incision which starts a little farther out on the axillary fold and extends a little farther down onto the humerus over the bicipital groove. The tendon of the pectoralis major is brought into view and the

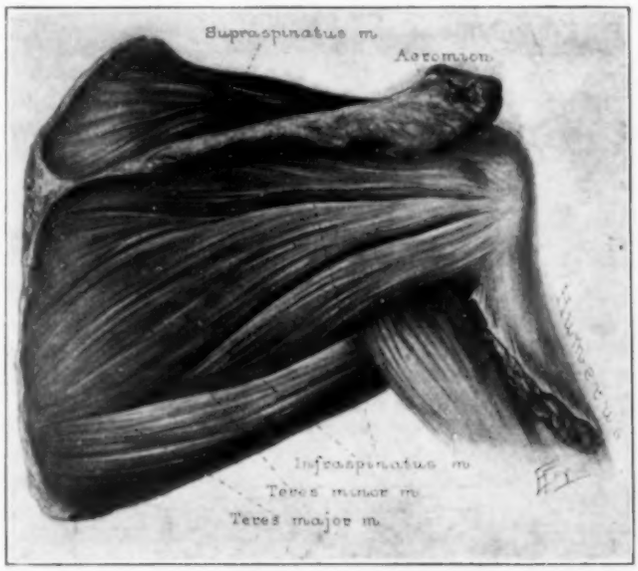

Fig. 2.—Posterior view of shoulder, showing insertion of supraspinatus, infraspinatus and teres minor muscles.

2. Albert, E.: Arthrodese bei einer habituellen Luxation des Schultergelenkes, Internat. klin. Rundschau, Vienna, 1888, **2**, 281-283.

3. Gerster, A. G.: Fracture of the Humerus and Scapula, Complicated with Severe Injury of the Entire Brachial Plexus Followed by Paralysis, Med. News, Philadelphia, 1884, **44**, 421.

4. Thomas, T. T.: Habitual or Recurrent Anterior Dislocation of the Shoulder. I, Etiology and Pathology, Am. Jour. Med. Sc., 1909, **137**, 229-246; II, Treatment, ibid., pp. 367-377.

lower half severed. The latissimus dorsi on the opposite side of the biceps tendon is exposed and the

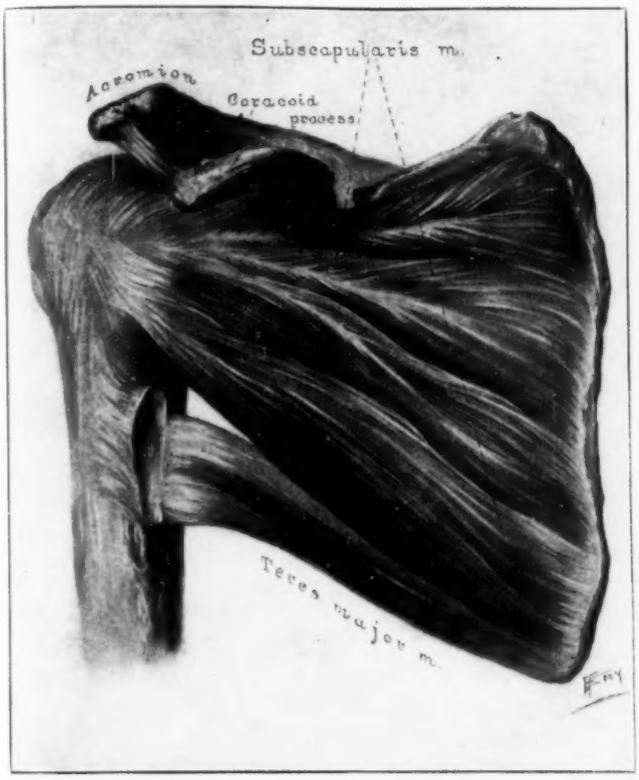

Fig. 3.—Anterior view of scapula, showing insertion of subscapularis and teres major muscles.

inferior half of it is divided. The arm is then placed in a plaster-of-Paris spica, and is held at a right angle to the body for from ten days to two weeks.

The question confronting the surgeon is which operation to choose in order to secure the relief desired. From a study of this group of only eight cases, I am unable to answer the question. The principles underlying the operations are dissimilar, and I know of no way of determining beforehand which procedure offers the best chance for cure. It is possible that if the capsule is strengthened, it will withstand the fulcrum action claimed by Young. On the other hand, the weakened capsule may withstand attempts at dislocation when the fulcrum is weakened, if the operator will lengthen part of the tendons of the pectoralis major and the latissimus dorsi.

Eight patients, of whom seven were men and one a woman, have been operated on in the Mayo Clinic for recurrent dislocation of the shoulder joint. One operation, performed July, 1917, is too recent to report, although the patient is well up to the time of writing (October, 1917).

Five of the remaining seven patients may be called cured. There is one in whom the operation was noted as a failure though really only a partial failure, for whereas, previous to the operation, the patient had experienced twelve or more dislocations a year, in the last year and a half he has had only two. In one other case, the treatment is apparently a distinct failure after a capsulorrhaphy and a lengthening of the tendons of the latissimus dorsi and the pectoralis major. If the patient in this case returns, I shall advise an arthrodesis of the head of the humerus and the glenoid fossa with the arm at a right angle.

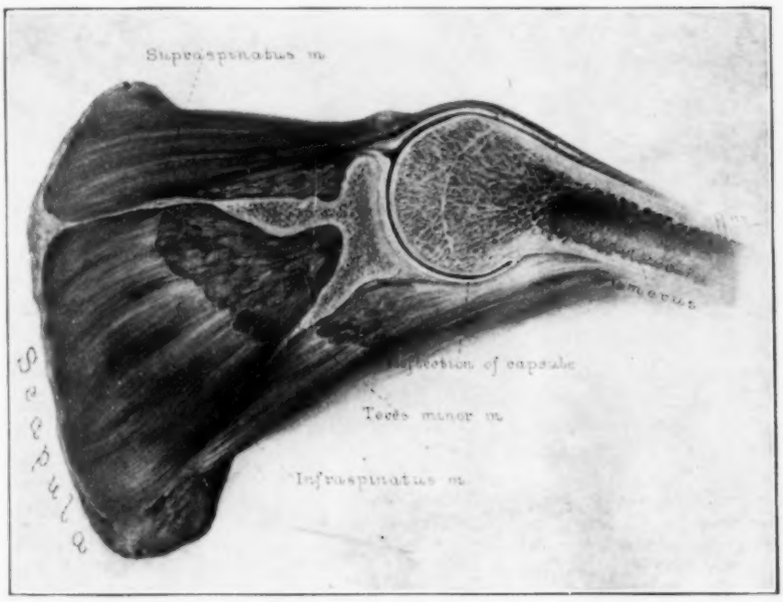

Fig. 4.—Frontal section through right shoulder joint, viewed from behind.

REPORT OF CASES

CASE 1 (66183).—W. C., a man, laborer, aged 24, came to the clinic for examination, April, 1912. Six years previously he had dislocated his shoulder, and the dislocation had not been reduced for thirty-six hours. After that there had been multiple dislocations, not prevented by apparatus. Capsulorrhaphy was performed, April, 1912, and there were no dislocations until November, 1913. January, 1914, the Young operation was performed. The man has since had dislocations, and the case must be called a failure.

CASE 2 (87419).—H. W., a man, laborer, aged 25, came for examination, July, 1913. Five years before, his left shoulder had been dislocated in a runaway accident. Later he had had seven dislocations, and was incapacitated for a month after each. There had been an interval of two years between the last two dislocations, the latest one occurring, June, 1913. Capsulorrhaphy was performed, July, 1913, and in a communication from the patient, August, 1917, he said he had had no further trouble and was doing everything he wished to do with his arm. The case may be classified as a cure.

CASE 3 (90312).—L. L., a man, clerk, aged 19, was first examined, August, 1913. Eighteen months previously, the shoulder had been dislocated while he was playing hockey. During the eighteen months the dislocation occurred probably a dozen times, the last time while he was swimming. Capsulorrhaphy was performed, August, 1913, and in a communication from his mother, September, 1917, it was stated that the arm feels somewhat weak but that no dislocations have occurred. The case may be called a cure.

CASE 4 (107485).—M. G., a man, merchant, aged 41, was examined, June, 1914. Nineteen years before, he had fallen and dislocated his right shoulder. It was reduced immediately. There were several dislocations during the next four years, and then he caught a cold which seemed to settle in the right shoulder. For four months there was a soreness which prevented his lifting the right arm to the head. After that, he had numerous dislocations, and ten years previous to the examination he fell, and in catching himself, dislocated the left shoulder. The left shoulder has not been dislocated, however, for two years, and we consider the dislocation

merely the result of an ordinary trauma. The right shoulder, however, had been out of joint repeatedly, the last dislocation being three weeks before the examination. Capsulorrhaphy was performed, June, 1914, and in a communication, August, 1917, the patient asserts that he has had no further trouble, and that he gets along nicely.

CASE 5 (118613).—R. V. A., a man, bookkeeper, aged 33, was examined, November, 1914. After a dislocation of the left shoulder, seven years previously, he had had recurring dislocations, at least twelve a year. He sometimes threw the shoulder out of joint in reaching for a book or anything on a shelf. November, 1914, capsulorrhaphy was performed. The patient was not troubled until May, 1915, when he had a peculiar feeling that his shoulder was going to slip out. He now reports that during the last year, two and one-half years after operation, the shoulder has slipped out twice. This case should not be put down as a distinct failure, since the shoulder is really improved, and the function is markedly improved. As the patient intends to return for observation, I have recommended that the Young operation be performed to see if it will stop the trouble.

CASE 6 (123803).—S. F. L., a man, lawyer, aged 25, was examined, February, 1915. Eight years previously, he had dislocated his shoulder playing football. The next time, it was dislocated while he was swimming, the third time, while he was playing baseball, and it had even slipped out while he was sleeping. At the time of the examination, he was wearing a band around the body to hold the arm to his side. He had worn it steadily for a year and a half, thus averting dislocations. The condition had completely incapacitated him for any participation in athletics. Capsulorrhaphy was performed, February, 1915, and in a letter from him dated August, 1917, from an officers' training camp, he says he has been able to do his bit in such strenuous tests as digging trenches, bayonet exercises and trench storming, without suffering the slightest inconvenience or trouble from the shoulder.

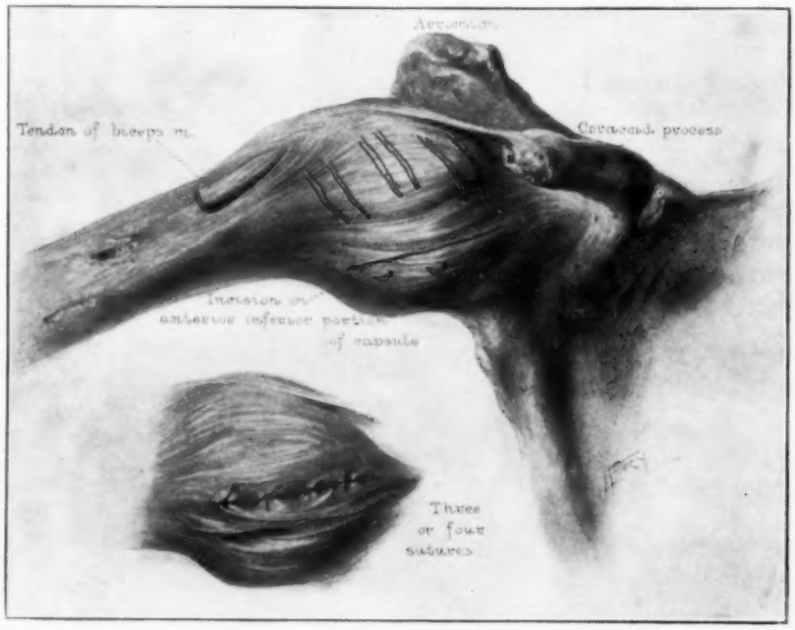

Fig. 5.—Capsule, showing overlapping (capsulorrhaphy), with four doubled chromic catgut sutures in place.

CASE 7 (156847).—J. C. S., a man, merchant, aged 30, was examined, April, 1916. Ten years before he had dislocated his shoulder. The dislocation remained for two days, and then reduced itself, which would lead one to believe it must have been a subglenoid dislocation. The shoulder has been dislocated many times since, and he has had to take gas, ether or chloroform about ten times. April, 1916, the Young operation was performed. In a letter dated August, 1917, the patient declares that he has had no further trouble, and that this shoulder seems to be as strong as the other one.

CASE 8 (200995).—H. J., a woman, nurse, aged 33, was examined, July, 1917. On Thanksgiving day, 1915, she fell and dislocated her shoulder. It was reduced about an hour later, and was held to the side for ten days. The next dislocation occurred Christmas day, 1916, to be followed by four dislocations. Capsulorrhaphy was performed, July, 1917, and up to the time of writing, October, 1917, there have been no further dislocations.

CONCLUSIONS

1. Recurrent dislocations of the shoulder may be cured by operation, capsulorrhaphy being the operation of choice.
2. Capsulorrhaphy has been found to be sufficient in the majority of cases.
3. Resection of the head of the humerus is not permissible for the condition.
4. Arthrodesis or ankylosing of the head of the bone to the scapula with the arm at a right angle would be an extreme measure, but permissible.

PARALYSIS OF RECURRENT LARYNGEAL NERVE ASSOCIATED WITH MITRAL STENOSIS

REPORT OF A CASE

GEORGE E. BROWN, M.D.
AND
BERT E. HEMPSTEAD, M.D.
MILES CITY, MONT.

Paralysis of the left recurrent laryngeal nerve is usually associated with aneurysm and dilatations of the aortic arch. It is only since Ortner's original report[1] in 1897 that we have learned that recurrent paralysis may be associated with and apparently caused by cardiac enlargement. In a recent statistical survey of recurrent nerve paralysis[2] embracing 116 cases of this type only four were reported as being due to mitral stenosis, all involving the left recurrent laryngeal nerve. In a series of 360 cases of unilateral laryngeal paralysis, quoted in the same article, only ten cases were due to an enlargement of the heart in mitral stenosis. The other causes of left recurrent paralysis are associated with mediastinal enlargements and in patent ductus arteriosus, the nerve being incarcerated with the aorta and ductus. Pericardial and mediastinal adhesions compressing the nerve have also been shown to be an etiologic factor.

Paralysis of this type due to mitral stenosis is of rare occurrence, and up to 1916, only eleven cases had been reported with necropsy confirmation. There have been, however, a large number of clinically reported cases with a recurrent paralysis associated with mitral stenosis in which the cardiac condition

1. Ortner: Recurrenslähmung bei mitral Stenose, Wien. klin. Wchnschr., Aug. 19, 1897.
2. Recurrent Nerve Paralysis, in Thomson, St. Clair: Diseases of the Throat.

could be proved the causative agent by elimination. This proof has become more exact since the advent and general use of the roentgen ray in chest diagnosis. Aneurysm and mediastinal enlargements can be ruled out with absolute exactness, making possible a differential diagnosis.

Fetterolf and Norris,[3] in their exhaustive report on the anatomic findings in this condition, have made the

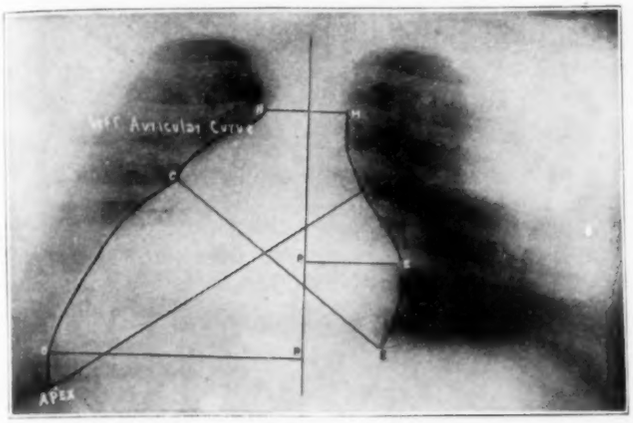

Fig. 1.—Seven foot heart plate, Dec. 24, 1915. Reduction shows heart reversed. Note the auricular bulge and increased heart width.

mechanism clear. Their conclusion, based on the study of a series of frozen cadavers, is:

It is our conviction, based on careful study of the anatomic relations in hardened preparations, that the indirect mechanism may be a variable one, but that when compression is accountable for the recurrent paralysis, it is always caused by the nerve being squeezed between the left pulmonary artery and the aortic ligament. Anything that will dilate or force upward the left auricle or the left pulmonary artery would tend to cause the condition. The anatomic relations are such that the direct pressure of any portion of a dilated left auricle on the aortic arch is impossible.

REPORT OF CASE

History.—Mrs. B. A., aged 35, housewife, referred by Dr. D. A. Baker of Jordan, Mont., consulted one of us (Dr. Hempstead), Dec. 24, 1915, for loss of voice. She had four children living and well; one child had died at the age of 23 days from convulsions, and the patient had had two miscarriages at three months. The menstrual history was negative. Two years before, she had had a light attack of articular rheumatism; the joints had been red and tender, and the patient was in bed four days. She had had gray hair since the age of 18. The present trouble had begun four months before with hoarseness, which was progressive and did not follow a cold. This condition progressed in spite of all usual treatment, and became so bad that talking above a whisper was impossible, and the patient was much distressed, as she had sung a great deal. There was no pain, nor cough. The patient had noticed shortness of breath for the past year, especially after exertion. She also stated that a "tight feeling" had been present during exertion, on which account she had discontinued heavy work. She had noticed no edema of the feet. The hoarseness had been worse after severe exertion.

Examination.—The patient was well nourished, weighed 170 pounds, was 5 feet 5 inches in height, and was of moderate obesity. No cyanosis, marked dyspnea, nor thyroid enlargement was noted. There were no abnormal pulsations. The voice was decidedly husky, and talking was possible only with the whispered voice. There was complete paralysis of the left vocal cord; no inflammatory reaction was present; the right cord did not pass the median line; there was no evidence of aneurysm. The lungs were normal. There were no visible pulsations, and no impulse was palpable. A faint thrill, palpated in the upright position, could not be timed at the first examination. On account of the large breasts, the cardiac outlines could not be defined by percussion. The apex was not located; very marked irregularity was present (auricular fibrillation), many beats not reaching the radial pulses. On auscultation, a loud blowing murmur was heard in the mitral area, transmitted to the axilla. A soft presystolic murmur could be heard with difficulty in the fourth intercostal space, not transmitted. Both the first and the second mitral sounds were loud and distinct. The aortic and the pulmonary sounds were negative. The liver edge was palpable. There was no edema of the extremities. The pulse was small. A marked difference could be detected in the pulses when the arms were elevated, the pulse being considerably stronger in the right. The systolic pressure was 155, the diastolic 90, in both arms. The urine and the Wassermann reaction were negative. Fluoroscopy revealed a broad heart, with the left auricular curve prominent. There was no evidence of aneurysm, and there were no mediastinal enlargements. The heart measurements (7 foot heart plate) were: length, 11 cm.; width, 13.5 cm. These differ from the figures of Clayton and Merrill,[4] who give as the average, in a series of fifty-four cases of women weighing from 160 to 175 pounds: length, 12.6 cm.; width, 11.7 cm. The measurements in our case show a decided increase in cardiac width, which is the usual thing in mitral lesions, particularly mitral stenosis. Figure 1, taken at the time of the first examination, shows the prominent left auricular curve, and Figure 2, taken nine months later, shows the decided reduction in this area.

Diagnosis and Treatment.—A diagnosis of mitral stenosis with an associated left recurrent paralysis was made. The patient was sent home and instructed to remain in bed six weeks with absolute rest, with digitalis in large doses and the continual application of the ice bag. She was observed daily by Dr. Baker. After six weeks she was allowed to get up and gradually resume a limited activity.

She again reported to us, March 4, 1916, showing a marked improvement. The throat examination revealed the left cord moved to the median line, though the movements were not so good as those of the right cord; the voice was about normal. The heart examination did not reveal much change. Arrhythmia was not so marked. The patient still had some dyspnea on climbing stairs. She was given further precautions regarding treatment, and allowed to return home.

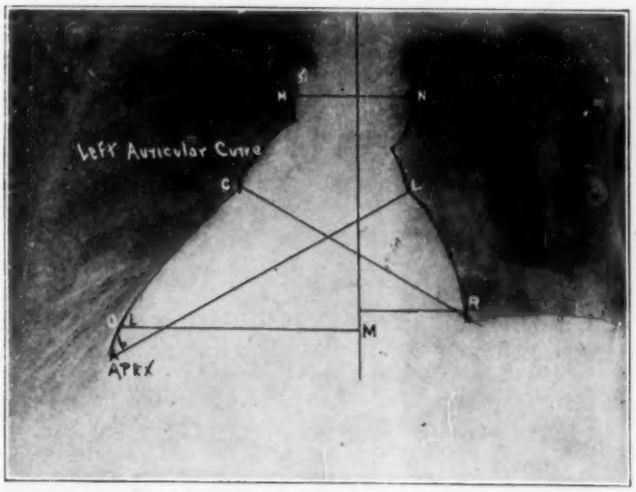

Fig. 2.—Seven foot heart plate, Sept. 10, 1916. Reduction shows heart reversed. Note the diminution in heart diameter, and auricular curve.

September 10, she again reported for observation. The examination of the cord showed practically normal movements; the voice was absolutely natural, and the patient had resumed her singing. No change in the size of the heart was

3. Fetterolf, G., and Norris, G.: The Anatomical Explanation of the Paralysis of the Left Recurrent Laryngeal Nerve Found in Certain Cases of Mitral Stenosis, Am. Jour. Med. Sc., May, 1911.

4. Clayton and Merrill: Am. Jour. Med. Sc., October, 1910.

demonstrable; the rhythm was regular. Thrill was felt with difficulty. The sounds were unchanged at the apex, with the exception of the first sound, which had become very clear and loud. Roentgenoscopy revealed the change in the left auricular curve as shown in Figure 2. A letter from the patient a year later states that she is in fine condition and has had no further trouble.

COMMENT

This was a case of mitral stenosis, associated with temporary paralysis of the left recurrent nerve during

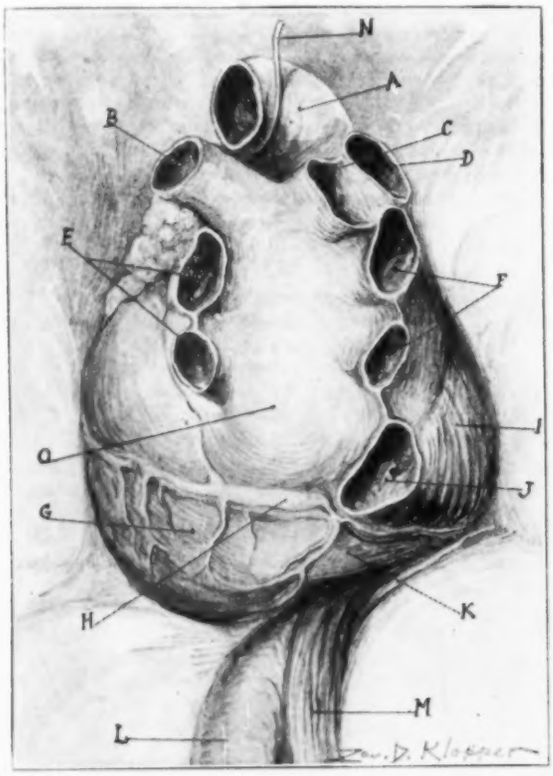

Fig. 3.—Drawing made from illustration in article by Fetterolf and Norris: Oblique view from the right of a dissection of the mediastinal viscera from behind: *N*, left recurrent laryngeal nerve; *A*, aorta; *B*, left pulmonary artery; *O*, left auricle; *G*, left ventricle; *I*, right auricle; *K*, right ventricle.

a period of mild decompensation, in which, under appropriate treatment, the left auricle decreased in size. This reduction in the size of the auricular chamber evidently released a pressure on the left recurrent nerve with restoration of its function. The case is the only one of this particular type that we have been able to find in which a diagnosis could be made early enough to allow the nerve function to return. The case illustrates the importance of a rigid investigation of every case of left laryngeal paralysis to rule out its more common causes, as no other etiology offers a better chance of relief than this particular type.[5]

5. In addition to the references already given, the following will be found of interest:
Hall, F. de H.; Ferrier, Sir David, and Permewan, W.: Discussion on the Etiology of Unilateral Paralysis of the Recurrent Laryngeal Nerve, Proc. Roy. Soc. Med., 1912-1913, **6**, Laryngol. Sect., pp. 139-168.
Von Schrötter, H.: Ztschr. f. klin. Med., 1907, **63**, 160.

Early Treatises on Heart Disease.—The first definite treatise on disease of the heart was that of Senac (1749), which was followed by the splendid books of Corvisart (1818), Laënnec (1819-1826), James Hope (1832), Bouillaud (1835) and Stokes (1854).—P. S. Roy, *Annals of Medical History.*

STUDIES IN THE TRANSPLANTATION OF WHOLE ORGANS

I. AUTOTRANSPLANT OF THE LEFT KIDNEY TO THE NECK WITH RIGHT NEPHRECTOMY IN THE DOG *

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The following experiments were undertaken to perfect the technic of organ transplantation with reestablishment of circulation and function. The neck was chosen for the site of the transplant because here the excretion can be readily observed and collected.

The first experiments in transplanting the kidney to the neck were done by Ullmann,[1] who in 1902 performed the operation in a dog. It was later tried by Carrel,[2] Carrel and Guthrie,[3] Floresco,[4] and Borst and Enderlen.[5] Of these experiments the most successful was that by Floresco, who obtained a functioning transplant which excreted bloody urine for eight days. The kidney was removed on the ninth day because of necrosis. Floresco contributed much to the subject by discovering the destructive effect of perfusing trans-

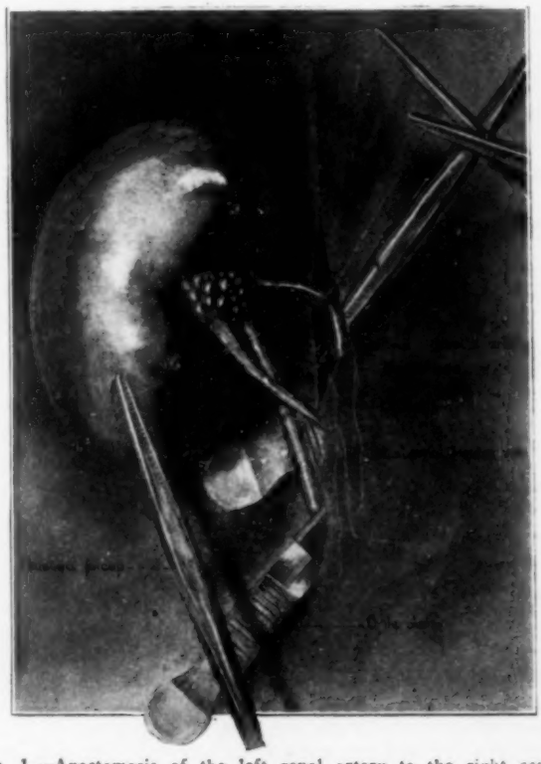

Fig. 1.—Anastomosis of the left renal artery to the right common carotid artery, and the left renal vein to the right external jugular vein. Natural size.

plants with saline solutions. Guthrie[6] has also laid great stress on this point. In 1910, Villard and

* From the Mayo Clinic.
* Presented before the joint meeting of the Olmstead County (Minn.) Medical Association and the Mayo Clinic, Rochester, May 23, 1917.

1. Ullmann, E.: Experimentelle Nierentransplantation, Wien. klin. Wchnschr., 1902, **15**, 281-282.
2. Carrel, A.: The Surgery of Blood Vessels, Bull. Johns Hopkins Hosp., 1907, **18**, 18-28.
3. Carrel, A., and Guthrie, C. G.: Functions of a Transplanted Kidney, Science, 1905, n. s., **22**, 473.
4. Floresco, N.: Recherches sur la transplantation du rein, Jour. de physiol. et de path. gén., 1905, **7**, 47-59.
5. Borst and Enderlen: Ueber Transplantation von Gefässen und ganzen Organen, Deutsch. Ztschr. f. Chir., 1909, **99**, 54-163.
6. Guthrie, C. G.: Blood Vessel Surgery and Its Applications, New York, Longmans, Green & Co., 1912, p. 120.

Tavernier[7] attempted the operation with more success. They obtained a functioning transplant which remained in the neck for sixty-eight days but without removal of the other kidney.

TECHNIC

Abdominal and cervical incisions are made simultaneously. The assistant exposes the kidney while the cervical vessels are being cleaned of their outer fibrous coats. The renal artery and vein and the ureter are freed, cleared and sectioned. The vessels are emptied

Fig. 2 (Dog B 949).—Upper specimen, transplanted kidney which has become infected. The sites of venous and arterial anastomosis are indicated at the positions pierced by pins. Note the continuity of caliber and gross structure at these points. Lower specimen, right kidney. The dog lived seventeen days.

of blood and washed with liquid petrolatum from a bulb syringe. The vessels are sutured with prepared raw silk threaded on No. 16 needles, the Murphy plain "over and over" stitch with Carrel stay-sutures and dark background being used. The ureter is led through a small separate wound in the skin. The wounds are sutured with linen. Collodion-gauze dressing is used. The ureter is covered with a wet dressing of neutral solution of chlorinated soda. Figure 1 shows some of the details of the technic.

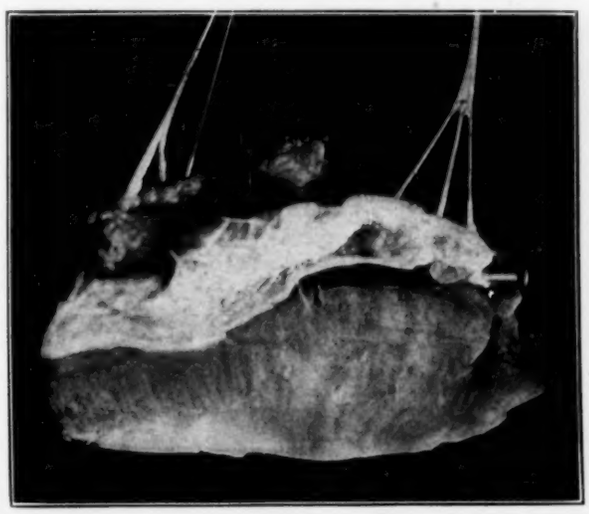

Fig. 3 (Dog B 949).—Branches of second cervical nerve which have become intimately attached to a newly formed outer capsule. Enlarged about two diameters.

In these experiments there were five partial successes before complete success was obtained (Table 1).

COMMENT

The fourth experiment furnished some interesting data. Twelve days after the transplantation a catheter was placed in the bladder and a ureteral catheter in the ureter of the transplanted kidney. One c.c. of phenolsulphonephthalein was injected into one saphenous vein. In four minutes the phenolsulphonephthalein appeared in the urine from the transplanted kidney. In the first hour 17 c.c. of urine were collected from

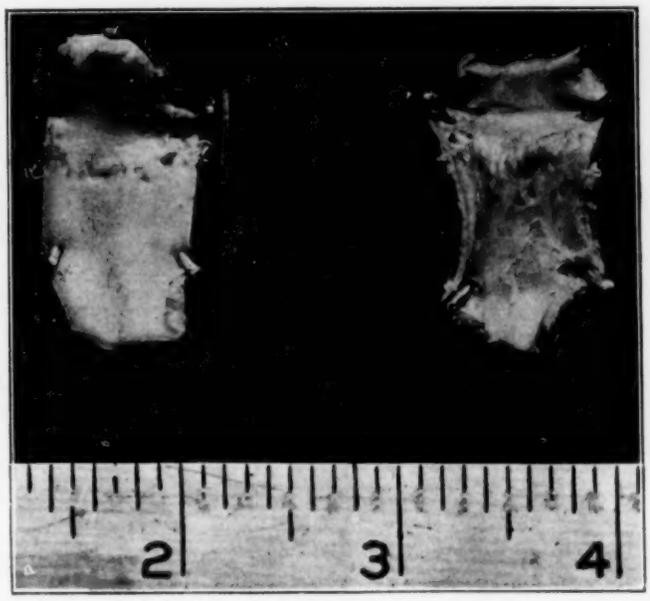

Fig. 4 (Dog B 949).—Inside appearance of the renal vein and artery at the sites of anastomoses. Continuous endothelium is shown, but there still remains suture material, shown at the sectioned edges and buried in the thickness of the vessel wall seventeen days after the transplantation.

the transplanted kidney, and 17 c.c. from the bladder. The specimen from the transplant contained 1.44 per

7. Villard, E., and Tavernier, L.: La transplantation du rein, Presse méd., 1910, **18**, 489-492.

cent. of the phenolsulphonephthalein. In the second hour the transplanted kidney excreted 13.5 c.c. of urine with a trace of phenolsulphonephthalein, while only 12 c.c. were obtained from the bladder. The urine from the bladder showed no phenolsulphonephthalein during the first two hours. On one occasion the end of the ureter was seen to move during contraction. Specimens from this dog are shown in Figures 2, 3 and 4. Figure 3 shows the second cervical nerve after it had been dissected away from the new perirenal tissues, in which it spread out in all directions.

PROTOCOL OF SUCCESSFUL EXPERIMENT

Experiment 388 (Dog B 976).—An adult, female mongrel fox terrier, weighing 8.6 kg., with brown and white short hair, was operated on, May 2, 1917.

8:58 a. m., intratracheal ether anesthesia was begun.

9:15 a. m., the incision was made.

TABLE 1.—DETAILS OF EXPERIMENTS

Date of Operation	Dog No.	Experiment No.	Time of Operation	Circulation Cut Off	Function	Remarks
3-16-17	B 870	243	3 hours, 20 minutes	Not recorded	None	Operation too long (dog recovered)
3-30-17	B 919	311	2 hours, 26 minutes	44 minutes	None	Distemper; pneumonia
4- 6-17	B 936	332	2 hours, 41 minutes	54 minutes	None	Peritonitis from tearing apart of transverse wound
4-13-17	B 949	345	2 hours, 21 minutes	57 minutes	6 days	Pyelitis of the transplant; foreign body in the rectum; distemper, pneumonia.
4-20-17	B 960	356	2 hours, 15 minutes	48 minutes	2 days	Renal vein anastomosed to the inferior thyroid vein; distemper, pneumonia.
5- 2-17	B 976	388	1 hour, 41 minutes	32 minutes	4 months 1 day	Successful; for details see protocol

TABLE 2.—AUTOTRANSPLANTATION OF KIDNEY (PROTOCOL OF DOG B 976)

Date and General Condition	Notes on Wound	Flow of Urine from Neck	Examination of Urine		Treatment*
			Gross or Chemical	Microscopic	
5- 2-17—Wt. 8.6 kg.; excellent	Operation	Flow in spurts	.....	.....	Dakin dressing
5- 3-17—Excellent	Collodion gauze loose	Waves of urine	Phthalein appeared in 7 minutes	.....	Dakin dressing
5- 4-17—Eye and nasal discharge	Serum let out	7 waves to minute	Amber, clear; alkaline faint trace albumin	Few leukocytes, erythrocytes and epithelial cells	Boric acid nose and eyes
5- 5-17—Excellent	Neck excoriated with urine	Waves of urine	Amber, clear, alkaline	Many leukocytes; ammonium urate crystals	Boric acid nose and eyes
5- 7-17—	.....	.....	.....	.....	Metal collar; no dressing
5- 8-17—Excellent	Slight discharge	2-6 waves per minute	.....	.....	Silver nitrate to wound
5- 9-17—Very lively	No discharge	Waves every few seconds	.....	Scattered leukocytes	Dr. sodium bicarbonate
5-15-17—Wt. 8.9 kg.	.....	7-5 c.c. in one hour†	Alkaline; 0.24 per cent. urea and ammonia	Few leukocytes	½ dr. sodium bicarbonate
5-16-17—Wt. 8.7 kg.	Right nephrectomy	60 c.c. per hour†	.....	.....	.....
5-17-17—See Fig. 5; watery nasal discharge	Slight discharge from neck	45 c.c. per hour†	Light amber	.....	½ dr. sodium bicarbonate; zinc ointment
5-18-17—Active, interested	New collar necessary	Squirted a foot once	Light amber; alkaline; no albumin; 0.3+ per cent. urea	2 or 3 clusters leukocytes; no epithelial cells	Petrolatum with chlorinated lime; licked off
5-19-17—Active, runs; became drowsy, dizzy	Lumbar collodion gauze; partly chewed off	Licked urine and chlorinated lime from legs	Very light amber	.....	Dram sodium bicarbonate
5-20-17—Good	Loin incised because of swelling	Free flow	.....	.....	Cold; brought in shivering
5-21-17—Very active	Dakin dressing on loin	Dripping	.....	.....	Dram sodium bicarbonate; Dakin dressing
5-22-17—Excellent	Dakin dressing on loin	Squirted over 12 inches	.....	.....	
5-23-17—Excellent	Dakin dressing on loin	.....	.....	.....	Shown at county medical society
5-24-17—	Dakin dressing on loin	Squirted from neck; head stationary	.....	.....	Dakin dressing; ate aluminum and rubber collar
5-25-17—Excellent	Neck abrasions from lack of collar and rubbing neck	.....	.....	.....	Zinc ointment
5-26-17—	Bit off leather collar	.....	.....	.....	Sodium bicarbonate
5-27-17—Excellent	Pus from punctured loin abscess	.....	.....	.....	Leather-metal collar bitten off
5-28-17—Excellent	Pus from punctured loin abscess	No injury to ureter from lack of collar	.....	.....	
5-29-17—Excellent	Abscess closed over	4 c.c. in 8 minutes or 30 c.c. per hour	0.6 per cent. urea and ammonia	.....	
5-30-17—Wt. 8.1 kg.; good	Abscess opened again	.....	.....	.....	Original collar on
5-31-17—Wt. 8 kg.	.....	.....	.....	.....	0.2 gm. calcium chlorid
6- 1-17—Wt. 8.3 kg.; good	Loin wound drains through small hole	.....	.....	.....	Belt collar on again
6- 2-17—Wt. 8 kg.; excellent	.....	.....	.....	.....	Zinc to neck
6- 3-17—Wt. 8 kg.	.....	.....	.....	.....	
6- 4-17—Wt. 8.5 kg.; excellent; cough	.....	.....	.....	.....	Boric acid nose and eyes (dusted)
6- 6-17—Wt. 7.8 kg.; excellent	.....	.....	.....	.....	
6- 7-17—Fine spirits	.....	.....	.....	.....	Collar left off
6-27-17—Wt. 8.9 kg.	Slight discharge	.....	.....	.....	
6-29-17—Excellent	.....	.....	.....	.....	
8-18-17—See Fig. 6	Loin wound moist	Spurts 1 meter away	Amber clear alkaline	No cells or detritis	Photograph taken

* Amount of sodium bicarbonate only estimated; it was taken with food and some lost.
† Urine collected by catching drops; very small error makes estimation necessary.

9:40 a. m., the vessels of the neck were clamped off with Crile clamps.

9:48 a. m., the renal vessels were clamped.

10:20 a. m., circulation was reestablished through the kidney.

10:56 a. m., the last stitch was taken in the wound.

11:05 a. m., anesthesia was stopped.

Fig. 5 (Dog B 976).—Twenty-four hours after right nephrectomy.

CONCLUSIONS

1. It is possible for a dog to remain alive and in good health more than four months after the transplantation of one kidney to the neck, even when the remaining kidney is removed two weeks after the transplantation.

2. After the transplantation of a kidney with its ureter, the ureter may be seen to move when contracting during excretion.

3. The ureter in a renal transplant may have the power to squirt the urine away from the animal by periodic contractions.

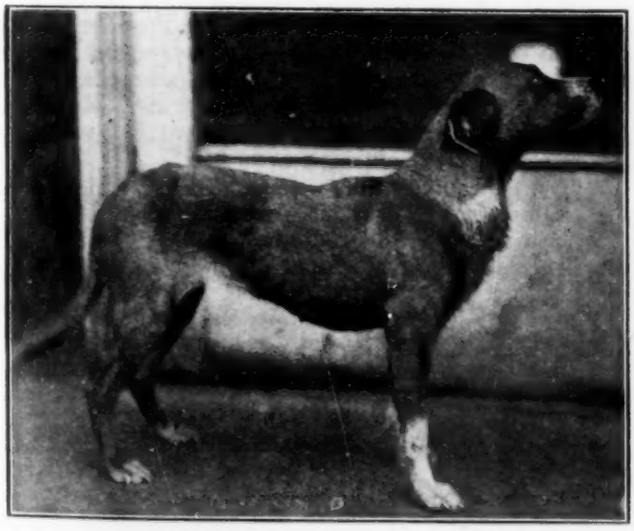

Fig. 6 (Dog B 976).—Three months and sixteen days after operation.

4. Phenolsulphonephthalein may return in four minutes from a transplanted kidney.

5. Many branches from the second cervical nerve may, in seventeen days, become intimately incorporated in the perirenal tissues of a cervical renal transplant.

6. The quantity of urine from a cervical renal transplant is markedly increased after the removal of the other kidney.

7. The neck is a favorable site for the observation of an experimentally transplanted kidney and its excretion.

ACTION OF EMETIN ON MALIGNANT TUMORS*

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NEW YORK

While there has been, up to the present time, no experimental confirmation of the theory that malignant tumors are of parasitic origin, there are still some observers, especially among clinicians, who hold the belief that the etiologic factor in neoplasia is a parasite, possibly amebic in origin.

This possibility suggested to me the testing of the effect of emetin (alkaloid) on malignant tumors, since this is considered a specific for amebic dysentery. Tests of the drug were made, therefore, in cases of human and animal carcinomas and of animal sarcomas. The results obtained in human beings seemed rather promising; but because of the many pitfalls in this special field of work, I considered it advisable to test the drug extensively on tumors of rats and mice before I drew definite conclusions. The experiments have shown that emetin has no effect on malignant tumors.

The reason for the publication of these observations is the fact that Mary Freeman[1] reported lately that she had used emetin locally in a case of skin cancer with seeming success. She states that the idea of using this drug in cases of cancer was suggested to her in a paper by Roehr[2] on the amebic origin of the disease.

Since it is highly probable that the use of emetin in cancer may suggest itself to others than Freeman and myself, it seems of some value to record my observations for future reference.

CLINICAL OBSERVATIONS

CASE 1.—M. S. was suffering from inoperable local recurrences, following a radical amputation of the breast for carcinoma. The treatment was begun in March, 1916. Injections were made into the tumors, 0.03 gm. of emetin being injected, under aseptic precautions, at each sitting. After the injections, each tumor increased to three times its previous size, softened and disappeared without discharge of pus. This case seemed very promising for a while. Then, at the lower angle of the wound, the patient developed a large recurrent growth which would not yield to treatment, and she died from internal metastases in July, 1917. The clinical diagnosis was confirmed by microscopic examination.

CASE 2.—S. M., nine months before, had undergone a radical amputation of the breast for cancer. When she came under my observation, she was complaining of swelling of the left arm and dyspnea. There were no external recurrences, nor any enlargement of the liver. After injections of emetin into both arms and legs had been given during a period of many months, the dyspnea disappeared entirely, and the swelling of the arm was considerably reduced. The condition improved so markedly that injections were stopped during the last six months. At the present time the patient seems to be in perfect health. The roentgen ray, however, shows a shadow in the lung. Too much stress cannot be

* From Columbia University, George Crocker Special Research Fund, F. C. Wood, director.

1. Freeman, Mary: South. Med. Jour., 1917, **10**, 246.
2. Roehr, C. G.: South. Med. Jour., 1915, **8**, 855.

laid on the fact of the disappearance of the edema. It is evident that this case cannot be considered of any importance in an estimation of the value of emetin.

ANIMAL EXPERIMENTS

Carcinomas and sarcomas in rats and mice were treated by injections: (1) into the tumor; (2) subcutaneously, and (3) intravenously. The maximal dose of emetin that could be injected into the tumor or subcutaneously without injurious effect was found to be 0.00043 gm. Repeated injections into the tumor caused necrosis and scab formation. In the majority of cases, the scab fell off after a week, leaving an indurated area. Sometimes an area of alopecia was the only indication of the former site of the tumor. Microscopic examination of the necrotic area and the surrounding tissues showed practically a total absence of tumor cells. There was, however, a marked round-cell infiltration of the tumor-bearing area and of the surrounding tissues. The disappearance of the tumors is evidently based on the cell-destructive action of the emetin. This destruction is not limited to the tumor-bearing area, but extends to the surrounding tissues, thus preventing the proper nutrition of the tumors and establishing another factor for the disappearance of the growth.

By another series of experiments, it was shown that the mechanical factor, that is to say, the injection of the fluid into the tumor, does not play any rôle in the results obtained. Two sets of tumors, from two different series of six animals each, were injected with identical quantities of emetin and physiologic sodium chlorid solution, respectively. Whereas the tumors injected with emetin disappeared, the tumors injected with sodium chlorid solution grew at exactly the same rate as the controls.

Subcutaneous injections of emetin at some distance from the site of the tumors seemed to retard the growth. It is, however, a well-known fact that a considerable percentage of these transplanted tumors are either retarded in growth or completely disappear. After testing the drug in this fashion in a great many animals, I reached the conclusion that though the growth seems to be slightly retarded in a fairly large percentage, the retardation does not occur in a sufficiently large number of injected animals to warrant the supposition that the findings are due to a specific action of the emetin. It is rather to be assumed that they were accidental.

The most conclusive evidence concerning the action of emetin on carcinoma and sarcoma was derived from the intravenous injection of this drug into mice. The maximal dose was 0.00022 gm., and injections were repeated three times in the course of a week. The animals stood the injections very well. Tumors of animals thus treated did not differ in their growth from the tumors of the controls. Furthermore, microscopic examination of the tumors did not indicate any change, when compared with the controls.

CONCLUSIONS

1. Injection of emetin into carcinoma and sarcoma may cause a complete macroscopic disappearance of most of the tumors. This disappearance is not due to a specific action of emetin on the tumor cells. The action of the drug is purely caustic, similar, though in less degree, to the action of phenol (carbolic acid), zinc chlorid, etc.

2. Repeated intravenous injections of emetin do not affect the growth of carcinomas and sarcomas. This proves conclusively that emetin has no specific effect on the growth of malignant tumors.

3. These observations do not strengthen the amebic theory of malignant tumors.

565 Park Avenue.

FAMILY PREVALENCE IN ANENCEPHALY

REPORT OF CASE

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NEW HAVEN, CONN.

The occurrence of anencephalic monsters is not extremely rare. Few obstetricians that have attended many births have failed to observe one instance at least of this type of monstrosity. Ballantyne[1] in a series of 325 cases of monstrosity and fetal disease found forty-six anencephalics, an incidence of 14 per cent.

The case here reported is placed on record because of family prevalence, which in itself is a rare occurrence. In only two of Ballantyne's series had the mother previously given birth to an anencephalic fetus. This was noted in 1861 also by Lammert[2] and a little later by Carli,[3] who reported the birth of three anencephalic fetuses occurring in succession as in the case here related. Martin[4] has reported the history of six anencephalic births in the course of the reproductive life of one woman. This woman had also given birth to two normal infants and one other monstrosity.

The course of pregnancy that ends in the birth of this type of monstrosity is as a rule not markedly abnormal. The most frequent abnormality found is hydramnios with its attendant symptoms. As may be expected, the fetal heart is heard with difficulty if at all, and the fetal movements are not apt to be readily elicited on palpation, or strongly felt by the patient. If the pregnancy goes to term, the course of labor is apt to be prolonged mainly because the presenting part acts as an unsatisfactory dilator, and because of premature rupture of the membranes in the cases associated with hydramnios. Dystocia may arise from the breadth of the shoulders. Obviously, presentation by the breech gives a greater chance for spontaneous delivery. If artificial delivery is indicated with the head presenting, both Cragin[5] and Williams[6] advocate version with breech extraction.

The prognosis for the mother varies but little from that of a normal labor if the patient is in skilled hands. The fetus if born alive usually dies quickly, although Ross reported a case in which the child lived more than sixteen days.

REPORT OF CASE

Mrs. C., aged 25, Russian Jewess, housewife, married five years, was seen in labor in the maternity wards of the Grace Hospital, New Haven, Conn., Oct. 24, 1917. This was her third pregnancy. The family history was negative; there was no history of monstrosities in either the patient's or her husband's family. Both were members of large, healthy families, and there was no blood relation. The previous history was negative except for the abnormal births. The

1. Ballantyne, J. W.: Antenatal Pathology and Hygiene, 1904, **1**, 332.
2. Lammert, G.: Arch. f. path. Anat., 1861, **22**, 230 (quoted by Ballantyne).
3. Carli: Bull. d. sc. med. di Bologna, 1863, Series 4, **19**, 30 (quoted by Ballantyne).
4. Martin, J.: Med. Exam. Philadelphia, 1840, n. s., **23** (quoted by Ballantayne).
5. Cragin, E. B.: Obstetrics, 1916, p. 703.
6. Williams, J. W.: Obstetrics, 1917, p. 861.

first pregnancy terminated at seven months spontaneously, and a dead anencephalic monster was born. This pregnancy was accompanied by hydramnios. The labor was inaugurated by premature rupture of the membranes. The second pregnancy was also accompanied by hydramnios, with premature rupture at the seventh month. At this time she was put to bed for two weeks, at the end of which a macerated anencephalic monster was removed from the uterus. In both of these pregnancies the fetal movements were felt but seldom by the patient. There were no puerperal complications. The menses began at 15, occurred regularly every twenty-eight days, and were free from pain. The last menstruation was Jan. 1, 1917. The fetal movements were felt early in July. Confinement was expected, Oct. 8, 1917. The health of the patient during the present pregnancy had been good; no nausea or vomiting had occurred at any time, no edema, no headache and no eye symptoms, and the bowels had been regular with occasional medication. The fetal movements had not been strong at any time, and of late had not been felt with certainty.

On entrance to the hospital the patient said that the bag of waters had broken twelve hours previously, that a great deal of water had drained away, and that pains had started soon afterward.

The pulse and temperature were normal, the teeth good, the nose and throat negative. There was moderate bilateral enlargement of the thyroid. The heart and lungs were negative, the urine was negative, and the blood pressure was 110 mm. The breasts were of moderate size, well formed, the nipples erect, and colostrum was expressed. Examination of the abdomen revealed a few new striae of small size. The fundus uteri was 8 cm. below the xiphoid cartilage. Fetal movements were not seen or palpated; the fetal heart was not heard, and the position was not made out. Pelvic measurements were: spines, 24.5; crests, 27; trochanters, 30; external conjugate, 18.25. The arch was wide. There was no edema of the extremities. In the region of the left groin, superficial varicosities of moderate size were seen. These extended to the vulva on the left side and for a short distance on the anterior and inner aspect of the thigh.

Rectal examination at this time was unsatisfactory; a vaginal examination showed a relaxed perineum and a well healed scar from previous laceration, the vagina negative, the os fully dilated, the membranes ruptured, and the presenting part slightly engaged. On account of the unusual sensation imparted to the examining fingers, deep palpation by the vagina was made, and the fingers slipped readily into the fetal mouth. In the absence of cranial bones, a diagnosis of anencephaly was made.

Labor pains at this time were of second stage character, and the patient was urged to use these for one hour in expelling the fetus. At the end of this time a rectal examination revealed no progress. The patient was etherized, and an easy version and extraction performed. There was no hemorrhage, the perineum was not torn, and the placenta and membranes were complete.

The fetus was stillborn; its weight was 3,150 gm., its length 48 cm. A typical picture of anencephaly with complete spina bifida presented itself. The head presented the well known appearance, the cranial vault and the scalp being practically absent, and this portion of the head covered by thickened dura mater, which was dark red. The head was deeply set on the shoulders, the eyelids protruding and thickened, the forehead absent, the nose flattened, the mouth open and the tongue protruding. The whole cerebrospinal canal from end to end was open. The vertebral arches in no place were united posteriorly, and were separated from 3 to 4 cm. most of the distance. The entire canal was covered by dura mater through which a few strands of nervous tissue could be seen. The remainder of the body was that of a well formed male child.

The puerperium was uneventful, and the patient left the hospital on the fourteenth day. A Wassermann test of the maternal and paternal blood was negative. The microscopic examination of the placenta revealed no evidence of placental syphilis.

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EXHAUSTION PSEUDOPARESIS

A FATIGUE SYNDROME SIMULATING EARLY PARESIS, DEVELOPING UNDER INTENSIVE MILITARY TRAINING *

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At present the various organizations of our Army are being subjected to a rigorous system of medical examination with a view to the elimination of those unfit for military service. In this system of inspection the special departments of medicine have received recognition, and it is becoming more and more apparent that neurology and psychiatry are destined to play a most important rôle.

Not long since, as Contract Surgeon, U. S. Army, I was assigned to one of the large officer's training camps in order to make neuropsychiatric examinations of the personnel. The camp contained approximately 1,500 men, divided into eight companies of infantry and four batteries of field artillery. Each candidate was given a special examination, as a result of which twenty-one men were recommended for discharge as suffering from disease of the nervous system of sufficient gravity to incapacitate them for the responsibilities and duties of military life.

Of this number, nine were examples of functional nervous disorders and would be classified under such headings as neurasthenia, vasomotor neuroses and the psychoneuroses. Only one case presented symptoms of a definite psychosis, probably belonging to the paranoid type of dementia praecox.

Another group of cases which we were able to demonstrate, and a most important one, showed evidences of syphilitic disease of the central nervous system in the form of incipient paresis, preparesis, or early cerebral syphilis. There were eleven cases in this group, of which six were regarded as incipient paresis, and the remaining five as examples of preparesis, or early cerebral syphilis.

Generally speaking, the clinical symptoms presented were not marked, and consisted merely of pupillary changes, tremors of the face and hands, and slight disturbances of articulation on repeating test phrases. General cerebral symptoms or evidences of mental deterioration were so slight as to be practically negligible from the diagnostic standpoint, and for the detection of this very important and serious group of cases we were almost wholly dependent on those slight but well established somatic symptoms of early paresis which are so characteristic to the trained observer.

It should be emphasized that in all of these instances of syphilitic disease of the central nervous system the men were able to perform their duties in the camp, some with considerable satisfaction to the commanding officers. They made no complaint of physical illness, and were apparently unaware of their true condition. In all of these cases, the syphilitic nature of the affection was confirmed by serologic examination of the blood and cerebrospinal fluid before the final recommendation for discharge was made.

The signal importance of eliminating such men from military service must be apparent to all, as the potential or incipient paretic would always constitute a serious menace to a military organization, especially

* Read at a joint meeting of the New York Neurological Society and the Section on Neurology and Psychiatry of the New York Academy of Medicine, Nov. 13, 1917.

as a commissioned officer. This is all the more true as the disease is in a very early stage with but few subjective and somatic manifestations; and the individual in question might be well launched on his military career before the evidences of a serious breakdown became apparent, perhaps with tragic consequences to himself or the men under his command.

As directly bearing on this question, I would emphasize another group of cases which came under observation, the formal recognition of which is of some importance because of the rather close similarity of the somatic symptoms to those of early paresis. In three of the cases the clinical diagnosis of paresis seemed fairly certain, and the fourth, although doubtful, was very suspicious; yet serologic examinations of the blood and spinal fluid were quite normal, and practically all symptoms disappeared after a week or ten days' rest.

In my opinion this condition was dependent on an exhaustion of the cerebrospinal centers, producing a clinical picture closely simulating that of early paresis. All of those clinical criteria which I have mentioned and which had enabled us to select from 1,500 men eleven undoubted cases of incipient paresis, preparesis or early cerebral syphilis failed us here; yet I do not feel that the fatigue cases in the acute stage could have been eliminated with certainty excepting by serologic examinations. Realizing, by personal experience, the diagnostic difficulties presented by these fatigue symptoms, I believe that attention should be directed to their occurrence and close resemblance to early paresis; for, if the examiner should escape the error of regarding the exhaustion case as one of paresis, he might fall into one equally lamentable and view the early somatic symptoms of paresis as merely exhaustion phenomena.

In civil life I have not encountered a similar condition, and the clinical facts to which attention is directed are chiefly of significance to military surgeons.

Before proceeding to the reports of my cases I would emphasize the unusual strain, both mental and physical, to which men in an officers' training camp are subjected. This is not only physical in nature, but also mental, as there is much theoretical knowledge to acquire, and not a few of the men have stepped suddenly from a rather sedentary life to the arduous labors and keen competition for an officer's commission. When one has personally observed the splendid spirit and effort which animates such a camp, one can then understand the unwonted nature of the stimulus and the possibilities of extreme fatigue not usually encountered in ordinary times and occupations.

REPORT OF CASES

CASE 1.—*History.*—Man, aged 36, single, previously a lawyer, referred to the post hospital, Sept. 24, 1917, for examination, had been in the officers' training camp for a month undergoing a course of intensive military training, and for several days had been actively engaged in the arduous work of the digging and construction of trenches. For some years he had practiced law, and had led a rather sedentary life. He was unused to the severe physical exercise which life at the camp had entailed, and it had been an effort for him to keep up. He had had gonorrhea at the age of 16, and malaria in 1907. He denied syphilis. Some years previously he had indulged excessively in alcohol, but during the last seven years he had been a total abstainer. He stated that he had had several vertiginous seizures during the past few days, some headache, and had felt nervous and depressed.

Physical Examination.—The face was flushed, the expression was dull and heavy, and the speech was tremulous. The pupils were moderately dilated and unequal, the right slightly larger than the left. The pupillary margins were rounded, and presented no irregularities. There was scarcely an appreciable reaction to light, and the faint response which was elicited was quite sluggish. This was true of both the direct and the consensual reactions. The sympathetic skin reflex was feebly present. The reaction on accommodation was preserved. The ocular excursions were normal save for a slight nystagmoid twitch in the extreme lateral positions. There was no true nystagmus. The cranial nerves were normal, and there was no optic neuritis. There were marked facial tremors and some lingual tremor, and when the effort was made to close the eyes and expose the teeth simultaneously, the muscles of the face broke into coarse tremor movements identical with those of early paresis. The speech also was tremulous, and suggested the paretic type. On the repetition of test phrases, there was a distinct dysarthria, with some syllable stuttering and associated movements of the upper facial muscles. There was a coarse tremor of the hands and fingers, and the handwriting was quite irregular and tremulous. The tendon reflexes were all present and active, namely, the masseter reflex, the supinator, biceps and triceps jerks, as well as the knee jerks and the Achilles jerks.

The abdominal and cremasteric reflexes were present, and the plantar reflex was of the flexor type (no Babinski). General sensation was unimpaired. There was no Romberg symptom, and no ataxia of the upper or lower extremities. Mentally the man was dull and slow, and gave the impression of being rather dazed. There appeared a distinct slowness of comprehension and a slowing of reaction time in response to questions, which was in contrast to his previous education and professional training. Problems in mental arithmetic were performed with difficulty, and with occasional errors. The character of the pupillary changes, the marked tremors of the face, tongue and hands, and the speech disturbance, together with the slight mental dulness, coincided very closely with the clinical picture of early paresis. He was therefore admitted to the hospital for observation, and specimens of the blood and cerebrospinal fluid were sent to the Army Medical School for examination. Both were reported negative for the Wassermann test. The spinal fluid showed no increase of globulin, and only two cells. The colloidal gold reaction was negative. The urine, heart and lungs were normal. There was no elevation of temperature.

The pupillary changes, tremors and speech disturbance persisted for several days, and then gradually subsided.

After a week's rest there was a marked improvement in the symptoms. The pupils were equal, and their responses to light became active, the tremors vanished, and the speech disturbance and all evidences of mental dulness and apathy disappeared. The case was finally regarded as an acute exhaustion of the cerebrospinal centers, with symptoms closely resembling those of early paresis.

CASE 2.—*History.*—Man, aged 30, single, a lawyer, referred to the post hospital, Sept. 24, 1917, for examination, like the previous patient was a candidate in the officers' training camp, and for a month had been undergoing intensive military training. For the past few days he had been actively engaged in trench digging, using a pick and shovel. He stated that for a fortnight he had been nervous, had lost sleep, and was unable to memorize the theoretical work. These symptoms had steadily increased. He had had several light attacks of vertigo, but did not lose consciousness. He denied venereal infection. He was moderate in the use of alcohol, but was an excessive smoker.

Physical Examination.—The face was flushed; the pupils were unequal, moderately dilated, and practically stiff to light. No definite light reaction could be obtained either directly or consensually. The reaction on accommodation was present, and a slight sympathetic response was also manifest. There was a marked tremor of the face and lips on articulation, and the speech was quite tremulous. On repeating test phrases there was the slight dysarthria and syllable stuttering characteristic of paresis. On the patient's attempting closure

of the eyes and exposure of the teeth simultaneously, a typical coarse tremor developed as in paresis. There was also a rather marked tremor of the hands and fingers. The cranial nerves were normal. There was no nystagmus, and no optic neuritis. The jaw jerk was active, and the tendon reflexes of the upper extremities were present and equal. The knee jerks and the Achilles jerks were active and equal. The abdominal and cremasteric reflexes were present, and the plantar reflex was of the flexor type. Sensation was unimpaired. There was no ataxia, and the gait and station were normal. The patient's mental processes appeared to be somewhat dull and retarded, and he gave the impression of having undergone slight mental deterioration, when his previous education and training were taken into consideration. This, together with the tremor, speech disturbance and pupillary changes, was strongly suggestive of incipient paresis. He was therefore admitted to the post hospital for further observation, and specimens of the blood and cerebrospinal fluid were sent to the Army Medical School for examination. The Wassermann test of the blood and the spinal fluid was reported negative. There was no increase of globulin, and only one cell. The colloidal gold reaction was negative. The heart and lungs were normal, and there was no elevation of temperature. The urine was normal.

The suspicious symptoms persisted for several days, and then gradually improved. After a week's rest, the pupillary reflexes to light had returned, the anisocoria disappeared, the tremors vanished, and the speech lost its paretic character. There was still some nervousness and a tendency to insomnia. In the absence of positive findings in the blood and spinal fluid, and after the rapid improvement under rest, the case was regarded as an acute exhaustion of the central nervous system, with somatic symptoms strongly suggestive of early paresis.

CASE 3.—*History.*—Man, aged 34, married, previously an insurance broker, referred to the post hospital, September 23, for examination, had been undergoing active military training for a month, and for the past ten days had been engaged in trench digging. He stated that he had had no venereal disease, and had not indulged excessively in alcohol or tobacco. He had worked hard as an insurance broker, but in recent years had not had much outdoor work. Although large and well developed physically, he had found the training increasingly trying and difficult. For several nights previous to his entrance to the hospital he had not slept well, and had felt nervous and irritable.

Physical Examination.—The face was flushed, and the speech somewhat tremulous. The pupils were unequal; the right was larger than the left. The responses to light were very feeble and sluggish. There was a good reaction on accommodation. A slight sympathetic pupillary response was elicited. There was marked tremor of the face, lips and tongue, and what appeared to be a distinct paretic dysarthria on the repetition of test phrases. Syllable stuttering was quite evident in the attempt to articulate. There was a very marked coarse tremor of the hands and fingers, which was more pronounced on the right side. The cranial nerves were normal; there was no nystagmus. The gait and station were normal, and there was no ataxia of the upper or the lower extremities. The jaw jerk was active, and the tendon reflexes of the upper extremities were present and equal on the two sides. Both knee jerks were diminished, especially the left. The Achilles jerks were active. The abdominal and cremasteric reflexes were present, and the plantar reflex was of the flexor type. Sensation was unimpaired. Mentally the patient showed no evidences of defect. He was, however, somewhat euphoric and inclined to be irritable and resentful of discipline. The tentative diagnosis of incipient paresis was made, and he was admitted to the post hospital for observation. The serum reaction of the blood and spinal fluid was negative. The urine was normal. The heart and the lungs were normal. There was no elevation of temperature.

After a week's rest, the symptoms gradually subsided. The inequality of the pupils disappeared, and the sluggish reaction to light was replaced by a prompt response. The dysarthria and tremor disturbance abated, and the symptoms of excitability and irritability disappeared. The knee jerks were equal and of normal intensity. The case was regarded as one of acute exhaustion, with symptoms suggestive of early paresis.

CASE 4.—*History.*—Man, aged 31, single, previously a surveyor, was referred to the post hospital, Sept. 20, 1917, on account of nervousness and insomnia. There was a well marked tremor of the hands, especially the right, and the speech was tremulous. On the man's repeating the test phrases, a dysarthria and syllable stuttering similar to that observed in early paresis was evident. There were also associated movements of the upper facial muscles during articulation. The tongue was somewhat tremulous on protrusion. The pupils were moderately dilated and unequal, and manifested a scarcely perceptible and very sluggish reaction to light. This was true of both the direct and consensual reactions. The response on accommodation was prompt, and the sympathetic reflex was elicited. The cranial nerves were normal. There was no nystagmus. The jaw jerk was active, and the tendon reflexes of the arms were present and lively. The knee jerks and Achilles jerks were active and equal. The abdominal and cremasteric reflexes were present, and the plantar reflex was of the normal type. There was no Babinski reflex. The gait and station were normal, and sensation was unimpaired. The Wassermann test of the blood, taken September 20, was negative, and another specimen, taken Sept. 27, 1917, was also negative. The urine, heart and lungs showed no deviation from the normal. The only subjective symptoms were nervousness and insomnia.

After a few days' rest, the pupillary reflexes to light became active, the speech cleared up and tremors disappeared.

Like the previous patients, this man was unused to active exercise, and had felt the rigors of physical training.

COMMENT

All of the cases just described were characterized by certain somatic symptoms strongly suggestive of early paresis, namely, the pupillary changes, the tremors, and the disturbances of articulation.

This triad of symptoms was so manifest, and resembled so closely those observed in the early stages of paresis, that the clinical diagnosis appeared reasonably certain, an interpretation which seemed all the more probable as we had already demonstrated cases with apparently similar symptoms in which the diagnosis had been confirmed by serologic tests of the blood and cerebrospinal fluid. It was a surprise, therefore, when the serologic reports were returned negative and the various symptoms gradually subsided under appropriate rest and treatment.

The mental and general cerebral symptoms were not marked in any of the cases, and, considered alone, would not have suggested paresis. Viewed, however, in relation to the somatic symptoms, the slight dulness and apathy in Cases 1 and 2, and the excitement and euphoria in Case 3, appeared significant, which was true also of subjective symptoms, such as headache, vertigo, insomnia, depression and nervous irritability. Alone they would have indicated only extreme fatigue or a functional disturbance; associated, however, with defective and sluggish pupillary responses to light, a paretic speech disturbance and marked facial tremors, they might well suggest the early neurasthenic symptoms of the paretic.

The gradual abatement and final disappearance of all suspicious symptoms at the end of a week's rest would indicate an exhaustion of the cerebral centers as the probable cause. Under still greater provocation of stress and strain, it is not improbable that such fatigue symptoms might even be the forerunner of a more serious type of exhaustion neurosis or neuropsychosis.

It is now held by most observers that fatigue is associated with the production of certain toxins which act on the central nervous system as well as on muscle tissue. Therefore, in addition to nerve exhaustion, the theory of a low grade intoxication of the nerve centers from fatigue products must be considered as a possible explanation of the symptoms. Among these may be mentioned such substances as carbon dioxid, paralactic acid and monopotassium phosphate (Lee[1]). Indeed, Weichardt[2] has long maintained that a specific fatigue toxin exists, and is the essential etiologic factor in the production of its characteristic manifestations, a theory which has been recently questioned by Lee and Aronowitch.[3]

The subject of fatigue has been carefully studied by many observers in different fields of research, and among its recognized mental symptoms are a diminished power of attention, a lack of the ability to concentrate, a slow reaction to sensory stimuli, and slowness in reasoning, as well as errors and slowness in mathematical calculation (Lee[4]). If such symptoms were present in any marked degree and associated with the somatic symptoms mentioned above, they might well lead one into error.

It is well known also that fatigue is a frequent cause of tremor (Pelnar[5]), and a tremor after prolonged muscular activity is known to all from personal experience. In neurasthenic states some tremor, usually a fine tremor, is an almost constant symptom. The unusual degree, wide distribution and persistence of the tremor in these fatigue cases were probably dependent on the prolonged mental and physical strain and a special predisposition to exhaustibility of the nerve centers.

As the mechanism of speech requires a very delicate coordination of higher cortical centers and muscular activity, it is perhaps not surprising that the disturbance of articulation noted in the group of cases should have occurred. Perhaps many have noted a slight lack of precision in articulation under conditions of extreme fatigue.

More difficult of explanation are the pupillary phenomena. It is well known that during the convulsive crises of epilepsy and even hysteria, the pupils dilate and are rigid to light; and Redlich has shown that the same phenomena may occur during violent muscular effort (Bumke[6]).

It is not, however, so generally known that in simple exhaustion states the pupils are dilated and may be sluggish to light, with preservation of the reaction on accommodation, a clinical fact that has been emphasized by Bumke.[7] Perhaps here we have an explanation for the suspicious pupillary phenomena that were noted in these exhaustion cases.

I well recognize the difficulties attending the examination of the pupillary responses to light and the dangerous element of personal equation. Oppenheim[8] has pointed out a possible source of error in the use of the pocket electric light in certain nervous subjects. The sudden illumination causes an emotional dilatation of the pupil which counteracts and resists the normal contraction to light, thus inducing a feeble or sluggish response. In the cases reported, every possible precaution was observed. The electric pocket lamp and daylight were both used and frequent tests made, and I can only repeat that the responses to light appeared to be of a distinctly pathologic type, a view that was reinforced by a quite definite inequality. The only possible explanation that occurs to me is that perhaps the fatigue or the toxins of fatigue had in some way influenced the sympathetic innervation of the pupil, with consequent inequality and retardation of the light reaction.

As I have stated before, I have not observed a similar condition in civil practice, which may be in part due to the special method of approach and the unusual etiologic conditions furnished by life in a training camp. These observations have, therefore, a limited value and significance. Under the same conditions, however, as obtained in these examinations I believe that the formal recognition of a fatigue syndrome simulating early paresis is worthy of consideration.

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THE DISINFECTION OF PNEUMOCOCCUS CARRIERS*

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Recent studies on the epidemiology of lobar pneumonia by Dochez and Avery,[1] Stillman,[2] and Sydenstricker and Sutton[3] have shown, in a considerable proportion of cases, that this disease arises by infection from without, because of the entrance into the upper air passages of virulent pneumococci of the fixed serologic types, contracted from persons suffering with lobar pneumonia or convalescent from this infection. In studies of a large number of healthy persons in contact with cases of lobar pneumonia due to Type I or Type II pneumococci, Avery, Chickering, Cole and Dochez[4] report that about 12 per cent. were found to carry the corresponding types of pneumococci, whereas among healthy persons not in contact with cases of lobar pneumonia, these types were found in but 0.3 per cent. or less. In almost every instance these observers found that the type of pneumococcus in the carrier corresponded with that of the case with which he had been associated. As these investigations have definitely established the existence of the carrier state of disease-producing pneumococci among healthy persons and those recently recovered from lobar pneumonia, and have indicated the means by which lobar pneumonia may be spread, it would appear advisable

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* This investigation was conducted under the auspices of the Pneumonia Commission of Philadelphia, Dr. David Riesman, chairman.

* A more detailed account of the experiments on which this report is based will be published in the Journal of Infectious Diseases.

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to attempt the destruction of pneumococci in the mouth secretions, particularly among convalescents and those persons in intimate contact with cases of lobar pneumonia, in an effort to shorten the period of time in which convalescents or healthy carriers harbor pathogenic pneumococci in the mouth. Wadsworth[5] has already tested the disinfecting power of saline solutions and bland alcoholic washes in ridding the mouth of pneumococci with somewhat encouraging results; more definitely pneumococcidal substances were not employed.

As the investigations of Morgenroth and Levy,[6] Wright,[7] Moore,[8] and Cohen, Kolmer and Heist[9] have shown the high pneumococcidal activity of ethylhydrocuprein hydrochlorid and, as found by the latter,[9] that other cinchonics, as quinin and urea hydrochlorid and quinin bisulphate, also possess considerable pneumococcidal powers, we have made our studies on the disinfection of sputum and the mouth with solutions of these various cinchonics in a menstruum of liquor thymolis,[10] our experiments demonstrating that the latter solution alone in dilution of from 1:4 to 1:10 possesses some germicidal activity for pneumococci and aids in disguising the bitter taste of cinchona compounds. We have approached this problem mainly from the laboratory side, employing both normal mouth secretions harboring Type IV pneumococci and the sputum of pneumonia convalescents harboring Type I pneumococci, the pneumococcidal activity of the disinfectant under study being largely determined by mouse inoculation.

The results of our experiments with sputum have indicated that dilutions of ethylhydrocuprein hydrochlorid as high as 1:30,000 and even to 1:160,000 had appreciable and frequently well defined pneumococcidal activity, while a 1:10,000 dilution almost invariably disinfected sputum containing pneumococci, as determined by intraperitoneal injection in mice; with such cinchonics as quinin bisulphate, dilutions in sputum varying from 1:10,000 to 1:20,000 were found to possess well defined pneumococcidal activity.

After many trials, we found that 1:10,000 dilutions of ethylhydrocuprein hydrochlorid or quinin bisulphate, quinin hydrobromid, and other cinchonics in a 1:10 dilution of liquor thymolis, constitute mixtures that may be readily used by persons as mouth washes and gargles. The slightly bitter taste remaining after the use of any of these washes is readily removed by rinsing the mouth with plain water. Experiments consisting in mixing sputum containing Type I or Type IV pneumococci with these solutions, and determining pneumococcidal activity by injecting portions into mice at varying intervals, have demonstrated pneumococcidal activity, particularly in the case of ethylhydrocuprein hydrochlorid.

In view of the established fact that a considerable percentage of persons in contact with cases of lobar pneumonia due to Types I and II pneumococci became carriers of these pneumococci, and that convalescents may carry them for varying intervals of time averaging from three to four weeks, the use of a mouth wash and gargle of ethylhydrocuprein hydrochlorid is suggested as worthy of clinical trial by those persons who have come in contact with cases of lobar pneumonia, and also by the patients themselves and persons suffering with measles or other infections favoring the development of lobar pneumonia. The systematic use of 1:10,000 solution of ethylhydrocuprein hydrochlorid in 1:10 dilution of liquor thymolis twice or more daily is not dangerous from the standpoint of toxicity due to swallowing portions of the drug, is not unpleasant, and may aid in ridding the mouth of virulent pneumococci, among contacts at least. Since this drug is scarce at present, one of the commoner cinchonics, as quinin bisulphate or quinin hydrobromid, may be substituted, although these are not as powerful pneumococcides. Similar dilutions in undiluted Dobell's solution may be used for douching or spraying the nose, or, incorporated in a dental cream, for cleansing the teeth. For washing the mouth and gargling, a solution is conveniently prepared after the following formula:

	Gm. or Cc.
Ethylhydrocuprein hydrochlorid or quinin bisulphate	0.005
Liquor thymolis	5.0
Distilled water, sufficient to make	50.0

As previously stated, the systematic use of either of these mixtures may serve to destroy or inhibit the multiplication of virulent and disease producing types of pneumococci among contacts and convalescents, and thereby aid in the prophylaxis of lobar pneumonia.

5. Wadsworth, A.: Jour. Infect. Dis., 1906, **3**, 774.
6. Morgenroth and Levy: Berl. klin. Wchnschr., 1911, **48**, 1561, 1650, 1779, 1983.
7. Wright, A.: Lancet, London, 1912, **2**, 1633, 1701.
8. Moore, H.: Jour. Exper. Med., 1915, **22**, 269.
9. Cohen, S. S.; Kolmer, J. A., and Heist, G.: Jour. Infect. Dis., 1917, **20**, 272.
10. This solution, which is used in the Polyclinic Hospital as a substitute for liquor antisepticus, is prepared after the following formula: benzoic acid, 64 grains; boric acid, 128 grains; thymol and menthol, each 16 grains; oil of eucalyptus, oil of wintergreen and oil monarda, each 4 drops; alcohol and glycerin, each 4 ounces; water sufficient for 16 ounces.

SUCCESSFUL TREATMENT OF ANTHRAX BY VARIOUS METHODS

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I have treated anthrax successfully by three different methods. Anthrax is not always fatal. When treated properly, few, if any, patients die. The anthrax bacillus is not difficult to destroy or inactivate, but the spore resists the ordinary antiseptics and disinfectants even in highly concentrated solutions. It also resists boiling for thirty minutes and drying indefinitely. Therefore, if disinfection is done thoroughly before spore development occurs, an epidemic can be avoided; but after spore formation has taken place, the best that can be done is to destroy the bacilli as fast as they form. Spores are derived from the bacillus. Thus, while disinfection of hides and tanneries cannot affect the spore itself, it may prevent the formation of spores by breaking the cycle. In view of the fact that a suitable medium is required for spore formation, and that the spore does not form in the animal's blood, it is reasonable to assume that there are no spores in the hide of an animal dead from anthrax, and that a dry, hairy hide is not a "suitable medium" for the formation of spores. Therefore, it is possible that disinfection of hides is successful owing to the absence of spores. Obviously this should be done before spore formation takes place. One never can be certain that the disease will not break forth even sporadically years after.

Hide handlers who wear gloves are infected on the neck or face, the bacillus frequently gaining entrance by way of dead hairs, abrasions due to the razor, etc. In one case it was possible to trace a case of anthrax to the gloves worn while handling hides two weeks before, the patient in the meantime following another

occupation. While shaving, this man broke the skin on the neck; he then put on the gloves which he had worn in the tannery, and inadvertently rubbed the abrasion on his neck. Anthrax developed quickly. The disease has also been traced to shaving brushes and fur boas.

At the site of inoculation, a small papule quickly forms. This rapidly develops into a small, dark swelling, not quite as large as a split pea, with an eschar on its summit. Soon a red halo appears, and a "blanched" zone about one-eighth inch in diameter is often present between the dark spot and the halo, resembling the area of anemia that results from the injection of cocain and epinephrin. Often there is a slight "puffiness" of the blanched area. There is no pus present, but as the lesion progresses, the eschar, which resembles burned leather and is of a hard, gummy consistency, enlarges, blebs form all around it, and these pour forth serum. Any attempt to remove the eschar at this time will prove a failure because it is firmly attached to the underlying tissues and is of such consistency that it resists cutting as well as tearing. Within a few hours the tissues become edematous to a degree out of all proportion to the size of the lesion. This edematous swelling is not hard and infiltrated, but soft. It does not pit on pressure, and offers no resistance to pressure.

There are no subjective symptoms, such as pain or itching, nor is there any fever or increase in the pulse rate while the disease is localized.

A successful excision of the lesion, removing an area about 2 or 3 inches in diameter, terminates the case. An unsuccessful attempt at excision is followed in about forty-eight hours by a slight evidence of edema at some angle of the wound, indicating that the disease is spreading in that direction. At about this time infiltration is present, but I believe that this may be due, in large measure, to the preliminary injection of phenol.

The diagnosis is based on the appearance of a papule with an ischemic zone later changing to slight puffiness, a dark, hard, resistant center and no pus, the rapid onset of the characteristic edema, and no itching, burning, pain or tenderness.

TREATMENT

I shall discuss the treatment under three heads.

1. *Treatment by Excision.*—As soon as the diagnosis is made, the skin is scrubbed gently with soap and rinsed thoroughly with sterile water. The skin is painted with aqueous 8 per cent. phenol (carbolic acid) solution or stronger, and rinsed with alcohol. Next the lesion is painted with collodion to avoid contamination of the incision. Eight per cent. phenol is injected into the tissues all around the lesion to wall off the infective process. From three to five syringefuls of solution (about 60 c.c.) will be sufficient. One-fourth inch outside of this phenolized zone, five or six syringefuls of 25 per cent. alcohol are injected. These injections are usually made within 1½ inches of the center of the lesion. The line of incision is painted with 8 per cent. phenol, and an area from 2½ to 3½ inches in diameter is excised. After the excision, the base and edges of the wound are painted with pure phenol (95 per cent.) and immediately neutralized with absolute alcohol. The surface is cleansed with alcohol, and a wet dressing applied. I have used boric acid, 20 per cent. alcohol, and hypertonic saline solution.

Ordinarily this terminates the case. If, however, in forty-eight hours, slight edema appears at some angle of the wound, and in twelve hours there is reason to believe that there is still some infection present, further steps are necessary.

2. *Treatment When Excision Fails.*—Injecting three or four syringefuls of 8 per cent. phenol into the edematous zone may effect a cure. If not, the tissues are incised freely, the course of the edema being followed, and gauze drains are put in. Phenol is injected into the tissues, due regard being paid to its toxicity, and an ice bag is applied. I am indebted to Dr. John Mansuay of Ralston, Pa., for this follow-up method. I have never known it to fail. I always use the ice bag, although some men claim to have good results from heat.

3. *Antianthrax Serum.*—At this time, serum should be used. I use the serum furnished by the U. S. Bureau of Animal Industry, Washington, D. C. The first dose is 35 c.c. injected intravenously, followed within from eight to sixteen hours by a second dose, given intramuscularly or intravenously. This dose is repeated if necessary. The only cases of chills or fever that I have ever seen in connection with anthrax occurred following this injection. In one case the temperature was as high as 106 F., and the pulse was 160, but I believe that the serum had a very beneficial effect. The patient recovered.

In case the lesion is near the larynx, an attempt should be made to excise the major portion from the side toward the larynx, as patients have been known to be choked to death by the edema.

In conjunction with this treatment, I give salts in full doses, strychnin, one-thirtieth grain, every four or five hours. The patient should have plenty of fresh air, and should keep quiet. A tracheotomy tube should be kept handy in case the edema reaches the larynx.

REPORT OF CASES

CASE 1.—M. P., man, aged 47, American, tannery worker, did not work Thursday, May 24, but worked Friday and Saturday. He shaved Sunday, and at night noticed a small pimple on the nose. He reported at the office, Monday, at 10 a. m. Bacteriologic examination was positive for anthrax. The lesion was typical of anthrax, with a red streak running out under the eye, a sign of a rapidly spreading infection. I have seen two such cases. The streak resembles a burst vein in the leg or dilated capillaries often seen on the nose, Because of its nearness to the eye, it was thought impossible to excise the infected area successfully. Therefore, I injected 8 per cent. phenol into the surrounding tissues, and I made five incisions, inserted a drain in each, and applied the ice bag continuously. Thirty c.c. of antianthrax serum were given intravenously. Fourteen hours later the right eye was closed, owing to the disease and the phenol. The temperature was 101.4 F.

May 29, at 11 a. m., the temperature was 101 F. The swelling extended back to the ear and down on a level with the mouth. Serum was given at 11:30 a. m. At midnight there was no marked change. The glands at the angle of the jaw were enlarged and tender; there was slight edema over the sternum. The temperature was 104.6 F., the pulse, 100.

May 30, there was slight edema of the tissue over the sternum. The glands at the angle of the jaw were diminished in size and less tender. Blebs had formed over the eye. The temperature fell during the day from 104 to 98 F.

May 31, there was no change. Serum was given at 8 p. m. The temperature was 101.8 F.

June 1, the swelling had nearly left the forehead. The temperature was 99 F. The edema over the sternum was the same; there was pitting on pressure. The neck was not swollen markedly; the lips were less swollen; the patient

could almost open the eye. The pustule was black; the blebs had burst, and there was a great discharge of serum in which were found numerous bacilli.

A third injection of serum, 20 c.c., was given.

Although the temperature rose to 104, the pulse rate did not exceed 100. No chills or other bad symptoms were observed.

June 2, the swelling had receded, and the brawniness and redness were disappearing; the lips and the other side of the face to which the swelling had extended were normal. In two more days the man was pronounced to be out of danger.

July 3, the site of the disease was healed. The patient reported at the office after having ridden 9 miles on the trolley.

CASE 2.—G. C., man, aged 40, American, April 30, noticed a small, insignificant papule over the sternocleidomastoid muscle; this case illustrates the importance of excising freely and of painting the surface with phenol. The papule was yellow, hard, and well "blanched." No eschar had formed, although the red halo had appeared. The area of edema was about 1 inch in diameter, and characteristic. Microscopically, the smear was found teeming with anthrax bacilli, more so than any I had ever seen.

The routine incision was made, but we did not swab the wound with phenol, and we sutured it at once, which was an experiment made to reduce the scar.

May 1, there was no change.

May 2, the wound was puffy at the upper angle, owing, perhaps, to the phenol.

May 3, there was edema up on the cheek. The incision looked good. The temperature was 101.8 F. At 9:30 a. m., 30 c.c. of antianthrax serum were injected, and strychnin was ordered, one-thirtieth grain, three times a day; also salts, and an ice bag was applied continuously over a wet dressing. At noon, two syringefuls of 8 per cent. phenol were injected. At 4 p. m. the swelling had not extended beyond the area injected. Multiple incisions were made, and 20 c.c. of serum were injected into the muscle.

May 4, the swelling was less on the right cheek, and it had not extended beyond the area injected with phenol. The swelling in the parotids was not noticeably changed, except that the edema had given away to some infiltration. The temperature ranged from 102 to 104 F., and the pulse from 85 to 108.

May 5, the temperature was 102 F., and the pulse 112.

May 6, the temperature was 99 F., and the pulse 76.

May 18, the patient complained of itching of the feet and legs. The lower lip was swollen, but the swelling receded in a few minutes. It was probably an angioneurotic edema. Dreams also disturbed the patient at this time.

TREATMENT OF ANTHRAX BY NORMAL BOVINE SERUM AND BY STEAM

According to V. C. Stewart of Woburn, Mass., the steam treatment consists of directing a jet of steam from a croup kettle on the pustule, the surrounding tissues being protected by asbestos. This is done several times a day, and seems to produce good results when the disease is localized. However, Stewart states that in about 70 per cent. of his cases the bacilli were so attenuated that this is not necessary. In these cases he uses a wet dressing. If the lesion is near the eye, the eye is protected with a wet gauze underneath the asbestos. Obviously, we must resort to other treatment if the disease is generalized.

I have never employed the treatment by normal bovine serum as such. I have heated the anthrax serum made at Washington, but have no statistics that would carry weight. In estimating the value of serum treatment, we must take cognizance of the fact that some patients recover spontaneously and that some bacilli are attenuated; yet in a large series of cases treated by Kraus, it would appear that serum has marked therapeutic value.

DETERMINATION OF TYPES OF PNEUMOCOCCUS IN LOBAR PNEUMONIA

A RAPID CULTURAL METHOD*

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In view of the fact that lobar pneumonia is prevalent in military camps in the United States, and that at present it is impossible to obtain white mice in sufficient numbers for carrying out the biologic tests necessary in the determination of types of pneumococcus, a rapid cultural method dispensing with the use of these animals is now proposed.

Experience has demonstrated the importance of determining the immunologic type of pneumococcus concerned in the production of each individual case of lobar pneumonia. A satisfactory method for this consists in inoculating a white mouse intraperitoneally with a small amount of sputum, and in recovering the pneumococcus by cultural methods from the heart's blood after the death of the animal. The type of pneumococcus can be determined in this way in about forty-eight hours. When it became evident that specific type pneumococcus serum has distinct therapeutic value, it was necessary to devise a method by means of which the type of infecting pneumococcus could be determined in a shorter time. It has been found that when a mouse is injected with pneumonic sputum in which other organisms besides the pneumococcus are present, the pneumococci grow quickly, and the contaminating bacteria tend to disappear, or at least to be inhibited in their initial growth. Pneumococci and their products accumulate so rapidly in the peritoneal cavity of the infected mouse that after a few hours the bacterial exudate, collected by washing out the abdominal cavity, may be used in the performance of agglutination and precipitin tests by means of which the specific type of pneumococcus can be determined, often within from six to eight hours. Both of these methods are satisfactory, but both require the use of white mice.

It has long been known that the addition of carbohydrate, such as glucose, and of blood proteins to mediums suitable for cultivation of the pneumococcus greatly accelerates the initial growth of this organism. It is also known that bile causes solution of the pneumococcus and possesses no lytic action for other bacteria. Use has, therefore, been made of these facts in devising a method for the rapid cultivation and type determination of the pneumococcus directly from the sputum of patients suffering from lobar pneumonia. These principles are employed in the following manner:

METHOD

A selected kernel of sputum, about the size of a bean, is washed, emulsified in broth, and inoculated directly into a centrifuge tube containing about 4 c.c. of special medium—glucose-blood-broth. After incubation in the water bath at 37 C. for five hours, a blood agar plate is streaked with a loopful of culture fluid for the isolation of the pneumococcus in pure culture and the subsequent confirmation of type. The red blood cells are then removed from the culture medium by slow centrifugation. Three c.c. of the

* From the Hospital of the Rockefeller Institute for Medical Research.

supernatant bacterial suspension are pipetted into a second centrifuge tube containing about 1 c.c. of sterile ox bile and allowed to stand in the water bath at 37 C. until solution of the pneumococcus bodies has occurred, usually about twenty minutes. Five-tenths c.c. portions of the bile solution of pneumococcus are used in precipitin reaction by mixing with an equal volume of immune serums. If bile is not available, determination of the type of pneumococcus may be made directly on the bacterial suspension by macroscopic agglutination.

In carrying out the method, attention should be given to the following details:

1. *Collection of Sputum.*—Care must be exercised in obtaining a specimen of sputum from the deeper air passages, avoiding contamination with nasopharyngeal mucus and saliva. With proper supervision it is possible to obtain a small portion of sputum coughed up directly from the lung. The specimen is collected in a sterile container and sent to the laboratory at once. If, for any reason, delay should occur in the examination of the specimen, it should be kept in the ice box.

2. *Microscopic Examination.*—Direct films are made from the sputum and stained by Gram, Ziehl-Neelsen, and Hiss capsule stain. Microscopic examination of these preparations serves as a control, giving a preliminary idea of the nature of the organism present, and the cleanliness of the specimen obtained. A small portion of sputum is selected, about the size of a bean, and washed through three or four changes of sterile salt solution in sterile Esmarch or Petri dishes to remove surface contamination. The selected kernel of washed sputum is transferred to a small sterile mortar, ground up, and emulsified with from 0.5 to 1 c.c. of broth, and the whole inoculated directly into 4 c.c. of the special medium.

3. *Special Medium.*—The basis of the medium is meat infusion broth[1] 0.3 to 0.5 acid to phenolphthalein, sterilized by the Arnold method, that is, twenty minutes on three successive days in order to avoid excessive heating. To each hundred c.c. of broth are added 5 c.c. of a sterile 20 per cent. glucose solution, and 5 c.c. of sterile defibrinated rabbit's blood. The final enrichment broth contains 1 per cent. glucose and 5 per cent. blood. This medium is distributed in small centrifuge tubes in quantities of about 4 c.c. each.

4. *Incubation.*—The tube of glucose-blood-broth, after inoculation with the emulsion of washed sputum, is shaken and incubated in a water bath for five hours at 37 C. This period of incubation has proved sufficient in cases thus far examined to produce an abundant growth of pneumococcus with a minimum growth of secondary organisms. The number of pneumococci present and the incubation time required in any given case can be determined by direct examination of the culture fluid.

5. *Subcultures.*—After incubation, a loopful of the sputum culture is streaked on a blood agar plate, from which a pure culture can subsequently be obtained for confirmation of the type of pneumococcus found by the rapid cultural method.

6. *Determination of Types of Pneumococcus.*—Precipitin Test: After removal of the red blood cells from the culture fluid by slow centrifugation (two minutes at low speed in order to throw down corpuscles, but not bacteria), the supernatant bacterial suspension is pipetted into a second centrifuge tube containing 1 c.c. of sterile ox bile. The bile causes solution of the pneumococcus bodies, and leaves unaffected other bacteria. Usually after twenty minutes at 37 C., solution has occurred, and is evidenced by clearing up of the bacterial turbidity of the culture fluid. Other organisms, if present, being bile insoluble, may be removed by centrifugation at high speed. The clear supernatant fluid, containing the solution of pneumococcus plus whatever specific soluble substance may have been elaborated by growth of the organism, is used in performing the precipitin test, being mixed with immune serums in quantities of 0.5 c.c. each.

Agglutination Test: If bile is not available, and if other organisms are not present in sufficient numbers to mask the specific reaction, the type of pneumococcus may be determined directly by macroscopic agglutination. The sputum culture in glucose-blood-broth is centrifuged at low speed for about two minutes to remove the red cells contained in the medium. The supernatant bacterial suspension is mixed with immune serums in quantities of 0.5 c.c. each, and incubated in water bath at 37 C. for one hour.

As various lots of immune serum differ in agglutinin and precipitin content, the dilution of serum required to assure specificity and the optimal concentration that will surely identify all type strains may vary. In view of this fact, it is well in employing the dilutions recommended[2] to use only serums, the agglutinin titer of which has previously been determined.

EXPERIMENTAL

The sputums of sixty patients suffering from lobar pneumonia due to various types of pneumococcus have been studied. Pneumococcus Type I was recovered in 21 instances, Type II in 10, Type II atypical in 5, Type III in 4, and Type IV in 20 instances. To establish the reliability of the method, parallel determinations of the infecting type of pneumococcus have been made in every instance by mouse inoculation and by the rapid cultural method. The results by the method described have corresponded in all cases with those obtained by the intraperitoneal inoculation of mice. In three instances, however, disagreement occurred on the first examination, the mouse method yielding pneumococcus Type I, while the direct culture method showed in each case Type IV. Examination of a second specimen of the sputum in these three cases yielded results in agreement with those obtained by mouse inoculation. In the repetition of these tests, care was exercised in the selection and washing of the sputum, precautions that were purposely not taken in the first instance, in order to test the general applicability of the new method. From the results thus far obtained, therefore, it would seem that the possible inaccuracies of this method are reduced to a minimum of error by attention to the details of technic. Care in the collection of sputum from the deeper air passages with the avoidance of saliva, selection of a purulent kernel of such sputum, thorough rinsing in salt solution, and grinding in a mortar facilitate removal of surface contamination with mouth organisms, and serve to free the pathogenic type of pneumococcus from the center of the sputum mass.

Healthy persons in from 50 to 60 per cent. of instances are known to harbor pneumococci in their mouth secretions, and these organisms have been found in most instances to belong to Type IV. Normal per-

1. Acute Lobar Pneumonia, Monograph 7, Rockefeller Institute, p. 25.

2. Acute Lobar Pneumonia, Monograph 7, Rockefeller Institute, p. 23.

sons who habitually carry a Type IV pneumococcus with impunity may acquire pneumonia due to infection with organisms of the more pathogenic Types I or II. This circumstance would seem at first glance to complicate the differential diagnosis of the infecting type of pneumococcus even by the most accurate method available, namely, mouse inoculation. Experience and experimental evidence have shown, however, that in such instances the disease-producing type of pneumococcus, by virtue of its greater invasiveness for animal tissues, rapidly outgrows the less pathogenic variety, and is therefore readily demonstrated in the peritoneal exudate and heart's blood of the infected mouse. On the other hand, the special medium devised for the rapid cultural method is independent of the virulence of pneumococcus, and exhibits, therefore, no selective affinity for disease-producing types. To this fact may be attributed the discrepancies described above, and on account of this fact, special precautions in technic are required. The short incubation time requisite for abundant growth of the pneumococcus in glucose-blood-broth, and the precautions already described in the selection of a suitable specimen of sputum, serve to limit to a considerable extent the growth of secondary organisms. The specificity of the method has been enhanced further by the utilization of the solvent action of bile, a bacterial phenomenon peculiar to the pneumococcus alone.

In many instances, the type of infecting pneumococcus has been determined more rapidly by the direct cultural procedure than by the technic of mouse inoculation. This new method, however, is presented to meet an emergency. When mice are available, the original procedure should still be employed. Only further experience can show whether or not the direct cultural method is the one of choice.

DEATH FOLLOWING THE ADMINISTRATION OF THEOCIN

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The value of theocin as a diuretic in certain diseases has been well established. Christian,[1] in a careful analysis of a variety of cases, concluded that in conditions in which there is little edema the drug has no effect, whereas in diseases of the cardiorenal systems in which edema is present theocin is of distinct therapeutic value. No cases of death or untoward symptoms directly following the administration of theocin have come under my personal observation. It frequently produces dizziness and nausea, and vomiting may result from taking it by mouth, but these symptoms may be avoided by exercising greater care in its administration and by dieting the patient at the time the theocin is given.

In the following two cases therapeutic doses of theocin were followed so quickly by signs of heart failure and death that it seems certain that the drug was responsible for the fatal outcome. The powder was obtained from a bottle that had been on the shelves, unopened, for two or three years. The label had the word "Theocin" printed on it; also the name of the firm that manufactured it "Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld." The contents of the same bottle had been given to other patients before and have been given since the cases reported in this article, and without any serious results.

1. Christian, H. A.: Some Studies of a Diuretic (Theocin), Arch. Int. Med., November, 1916, p. 606.

CASE 1 (Hospital No. 17-290).—*History.*—F. P. U., Chinaman, aged 32 years, was admitted to the Canton Hospital, April 2, 1917. He complained of edema of the feet and abdomen, indigestion, palpitation of the heart and precordial distress. The patient has taken alcoholic stimulants in moderate quantities. He denied venereal infection. The previous history was otherwise negative. His present illness began about a year ago when he noticed that he had edema of the ankles at various intervals.

Physical Examination.—The heart was examined and a loud diffuse double murmur could be heard, being most distinct at the second left intercostal space and thence transmitted over the precordium. There was moderate general anasarca, and the edema of the lower limb was especially marked. Hemoglobin was from 75 to 80 per cent. of normal. There was no albumin and no glucose in the urine, and there were no ova in the feces. Systolic blood pressure was 130 to 135 mm.; diastolic pressure, 60 to 75 mm. April 17, it was noted that the edema had entirely disappeared. The patient's appetite was good. A faint systolic murmur could be heard at the apex. The patient still noticed palpitation on walking, and occasionally there was some return of the edema of the lower limbs.

Treatment.—While in the hospital, the treatment consisted of tincture of digitalis, saline laxative and an elixir of iron, quinin and strychnin. May 3, it was decided to give theocin because of scantiness of the urine and some return of edema. One gm. of the powder was divided into three equal parts and one part was given at 8 a. m., another at 10 a. m., and the last dose at 12 noon. At 7 a. m. the pulse was of good volume and the rate was ninety-eight per minute. Soon after taking the powders there was marked dyspnea and precordial distress, and in the afternoon the pulse rate was 135. This condition continued and the patient became progressively worse until death occurred on May 5 at 7:30 a. m. The pulse during these days registered from 135 to 140. The highest rate that it had previously attained was 118 on one occasion. Various cardiac stimulants were vigorously given to sustain the failing heart, but without avail, and the patient died with all the symptoms of cardiac failure.

CASE 2. (Hospital No. 17-440).—*History.*—T. C., a Chinaman, aged 30 years, was admitted to the Canton Hospital, May 14, 1917, complaining of edema of the lower limbs and abdomen. Previous history is not relevant. His present illness began in January, when a cough with hemoptysis and dyspnea developed. Then he noticed fulness in the abdomen, and anorexia. Edema of the feet developed which gradually extended to the thighs and abdomen.

Physical Examination.—There was marked swelling of the abdomen and edema of the lower extremities. Heart: Apex beat was displaced slightly to the left and below the nipple. Cardiac dulness was increased downward and to the left. There was a diffuse double murmur heard over the precordium, loudest at the apex. Lungs: There was dulness over the base of the right lung posteriorly, and numerous moist râles were heard. The liver extended 2 inches below the costal margin. There was marked irregularity of the pulse. The hemoglobin was 90 per cent. of the normal. The urine contained no albumin or glucose. Blood pressure: The systolic was 105, but it was impossible to register accurately the diastolic pressure. Feces: Ascaris ova were found.

Treatment.—This consisted of moderate doses of tincture of digitalis, rest in bed, free purgation with saline laxatives, santonin for the purpose of expelling the ascaris, and stomachic remedies for the anorexia. Improvement soon set in, although at times the patient was disturbed at night by attacks of asthma, which could be relieved only by hypodermic injections of morphin and atropin. May 20, on account of the persistent edema and scanty urine, theocin was given in three doses, each 0.33 gm. at 8, 9 and 10 a. m. The urine

increased from 400 to 1,010 c.c. in the twenty-four hours with marked relief to the patient. On June 2, theocin was again given the same as previously. The urine increased from 330 to 1,020 c.c. which brought much relief to the patient. By June 18 all edema had disappeared. The heart action was regular and no murmur was audible. There had been no recent attacks of asthma. The urine was scanty, but the patient felt much better and was planning to leave the hospital in a few days. The pulse was 70 and respiration was 18. June 22 only 250 c.c. of urine were passed, hence 0.6 gm. of theocin divided into three powders to be taken at 8, 9 and 10 a. m., was prescribed. Shortly after taking the first powder the patient noticed some cardiac distress which became much worse after taking the second powder. Free diuresis occurred but the pulse became rapid and feeble and the patient died at 2:30 p. m. with dyspnea and great precordial distress. Intensive cardiac stimulation proved to be of only transient value.

Clinical Notes, Suggestions, and New Instruments

A DOUBLE LUMEN IN A HUMAN FALLOPIAN TUBE*

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The specimen described was given to me by Dr. Will G. Nichols of Fargo, N. D., in response to a request for human material to be used for class work in histology. The tube was serially sectioned, and only on examination of the finished slides was the double nature of the lumen revealed.

The patient from whom this tube was taken was operated on for a dislocated and adherent ovary that had caused severe pain at intervals for several years. A year and a half before the present operation her appendix had been removed by another physician as being the cause of the trouble, but the removal afforded no relief. Dr. Nichols operated to break up the adhesions around the ovary, and it was found that the ovary was large and inflamed, as was also the tube on

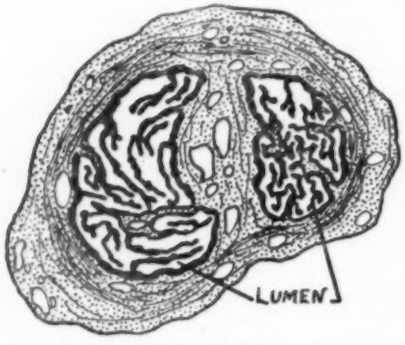

Fig. 1.—Section of fallopian tube midway between uterus and ovary.

that side. The tube had a decidedly tuberculous appearance when examined microscopically, so that both tube and ovary were extirpated, and immediately preserved in liquor formaldehydi. Later tests showed that the tube was not tuberculous.

Serial sections show a very interesting double nature of the lumen. At the proximal or uterine end, the tube seems to be normal; but a swelling starts about half way to the fimbriae, and for the rest of its length it is about twice the normal size. Sections in this enlarged portion show a complete double lumen, each one about the same size (Fig. 1). Toward the uterine end the lumen is single, and gradually changes into two by the formation of a partition as the ovary is approached. This condition persists for a short time, and then one of the lumina gradually becomes smaller, and as it does so draws away from the other or main opening, and ends in one of the fimbriae some distance away from the main opening of the fallopian tube (Fig. 2).

The explanation of this double character is somewhat difficult. In the middle part of the tube it may be explained by the adhesion of the two sides of the tube from continued traumatism during several years; but this is not quite so clear in the distal portion, where the two openings are rather widely separated. It is quite probable, however, that the continued traumatism due to displacement down behind the uterus for a number of years had caused the union of the two sides of the lumen, and then further pressure caused the

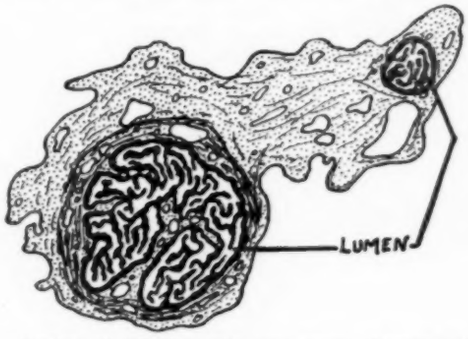

Fig. 2.—Section of fallopian tube near ovary, showing main lumen and smaller one somewhat apart from the main duct.

gradual increase in distance between the two lumina, thus causing them to open at rather widely separated points at the end of the fallopian tube.

* From the Zoological Laboratory of the North Dakota Agricultural College, Proceedings No. 2.

ABORTION DUE TO SUPERFETATION

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Acting Assistant Surgeon, United States Public Health Service

There would be no way of controlling or of preventing abortion in the event of the implantation of a second fetus in a uterus already occupied by one in a process of development, even if the condition were known to exist. The case herewith reported is of great interest, nevertheless, as demonstrating that abortion or miscarriage may be produced by superfetation. It might even be a frequent, though often overlooked, cause.

Mrs. M. G., aged 22, of previous healthy condition, menstruated regularly and normally prior to marriage. The first child, born May 7, 1916, and the second child, born April 10, 1917, were delivered normally. Following the birth of the second child, menstruation began during the latter part of May, continued for fifteen days, and was irregular in quantity. During the latter part of July the patient began to menstruate again, and complained of a severe pain over and on both sides of the uterus. The pain was very severe, and lasted fifteen or twenty minutes. She menstruated all that night quite profusely, but menstruation ceased the following day. She menstruated almost continuously thereafter, never stopping for a period of more than twenty-four hours at a time, and the menstruation was rather erratic, sometimes profuse and then again often slight in amount. During all this period, she complained of extreme tenderness on external palpation of the uterus. The blood discharged was fresh and bright red, no clots coming from the uterus.

Sunday, September 16, the patient complained of a peculiar sensation in the region of the lower abdomen which she described as "being similar to the fluttering of a chicken whose head has just been cut off." This lasted only a short time, and no further sensations were felt. This was followed by a slight chill, and the blood discharged now became dark brown, and began to have a slightly abnormal odor.

Tuesday, September 18, as the condition of the patient was becoming gradually worse from the continued loss of blood, Dr. F. M. Sanger of Oklahoma City, who is stationed here as Captain in the Medical Reserve Corps, was called in

consultation. He concurred in the opinion that, owing to her extremely weakened condition and the fact that all ordinary therapeutic remedies and rest in bed had been applied during the past month, without improvement in the condition of the patient, it was necessary to assist Nature in more rapidly emptying the uterus of its contents. The uterus was packed, and the previous slight labor pains that she had been suffering for the past two days were greatly augmented.

In the afternoon of September 21, the patient delivered a fetus of about four months' development and in appearance indicating that death had taken place at about the time she mentioned having felt the peculiar sensation, the preceding Sunday. The placenta was expelled along with the larger fetus, showing that it had been entirely detached. I introduced the speculum to make a thorough examination after the contents of the uterus had been expelled, and in the mouth of the cervix discovered some white tissue protruding, which I extracted. This proved on examination to be a fetus of about fifty days' development, corresponding closely to the time when menstruation began in the latter part of July.

My theory for the possibility of the second fetus' being the cause of the continued menstruation and abortion is that this fetus developed near the margin of the placenta of the older fetus; in its development it gradually detached more and more of the original placenta from the uterine wall, causing the almost continued bleeding from the uterus; and the profuse hemorrhages came on as the larger vessels were involved. I desire also to call attention to the extreme tenderness and sensitiveness on external palpation of the uterus. This may be a diagnostic symptom in threatened abortion due to superfetation, and is probably explained by the traumatism produced by the gradual detachment of the placenta from the uterine wall.

Had the second fetus been discharged later on, it would probably have been embedded in a blood clot and thrown away without its presence having been discovered. I have no hesitancy in stating that I believe the continued hemorrhage and abortion in this particular case were due entirely to the implantation of the second fetus too close to the site of the original fetus.

Dr. F. M. Sanger, who rendered valuable assistance in the case, having been present with me at the time of the delivery of both the embryo and the fetus, suggested that perhaps many cases of abortion occurring in a similar manner with continued menstruation for some period before the expulsion of the fetus may have been caused by superfetation, the second embryo being undiscovered.

The patient made an uneventful recovery, and her general improvement was very rapid.

ARTIFICIAL RESPIRATOR

FRANK C. DUDLEY, M.D., BROOKLYN

The apparatus consists essentially of an inhaler with inflated mouthpiece, to which a heavy rubber bulb is attached. Air and oxygen are forced into the lungs when the bulb is compressed, and withdrawn by suction when the bulb is released.

This apparatus is very simple; there are no valves or complications to get out of order. The valve in the instrument is simply a small hole. When air or oxygen is being forced into the lungs, the finger is placed over the hole and held there until the air is drawn out; then the finger is removed, and the bulb compressed and released, drawing into the bulb a fresh supply of air or oxygen. Then the finger is replaced over the hole, and the air is forced into the lungs and then withdrawn by the suction of the bulb.

The bulb contains the proper amount of air for an adult; but smaller amounts may be given by compressing the bulb less in case of children or in asphyxia neonatorum. The sense of touch shows how much air can be forced safely into the lungs. By connecting the oxygen tube to a generator or tank of oxygen, any desired mixture of air and oxygen may be given to the asphyxiated patient. One person can operate the respirator and hold it tightly to the patient's face at the same time.

The inhaler part when used alone makes a very satisfactory one for ether and chloroform. Gauze is placed in the chamber above the wire screen, and the anesthetic applied to the gauze by the drop method. The opening is large, permitting plenty of air for the open method; and oxygen may be administered simultaneously when desired.

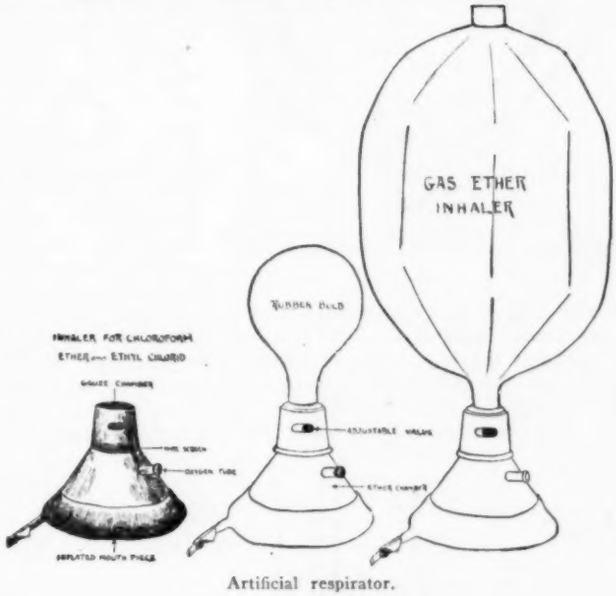
By attaching a gas bag to the inhaler instead of the heavy rubber bulb, one has a gas-ether apparatus that is simple and effective. When the patient is anesthetized with nitrous oxid gas, a twist of the connection opens the valve to any desired size, and ether is dropped on the gauze through the opening. When desired, the gas bag is removed and ether continued by the drop method as usual. Oxygen may be administered with nitrous oxid either through the gas bag or through the oxygen tube in the inhaler.

By using the gas bag alone, one has an ideal closed method inhaler for ethyl chlorid or ether.

The advantages of this new apparatus are:

1. It is an inexpensive apparatus that will perform artificial respiration successfully. The price will not be over $25 for the complete outfit.

2. It is light and can be carried in the physician's bag. As it is simple, there is nothing to get out of order.



Artificial respirator.

3. The sense of touch, better than mechanical adjustments, shows how much air and oxygen should be forced into the lungs.

4. The one apparatus serves for four instruments: (*a*) an artificial respirator; (*b*) an inhaler for ether and chloroform by the open method; (*c*) an inhaler for ether and ethyl chlorid by the closed or rebreathing method, and (*d*) a simple gas-ether apparatus that works.

This new instrument, on account of its lightness and combination of uses, should be especially valuable to the general practitioner and the obstetrician. It will prove a great aid in all cases of collapse after anesthesia, poisoning from gases in mines and on the battlefield, shock by electricity, drowning, and asphyxia from any cause.

Tuberculosis and Pregnancy.—The tuberculous married woman should be instructed concerning the danger of pregnancy, as it is an important factor in lighting up a quiescent tuberculosis. Pregnancy should be avoided until the pulmonary lesion has been arrested for several years. When conception has taken place, pregnancy should be terminated before the fifth month in all active cases of early and moderately advanced pulmonary tuberculosis, and in all cases of advanced tuberculosis, when the process is quiescent. It is for the best interest of both mother and child to prohibit the tuberculous mother from nursing her child.—S. A. Douglass and J. E. J. Harris, *Am. Rev. Tuberc.*, 1917, **1**, No. 8.

A COMBINATION FINOCHIETTO AND STEINMANN PIN TRACTION STIRRUP

GEORGE W. HAWLEY, M.D., BRIDGEPORT, CONN.

Traction, either temporary or continuous, is one of the forces constantly utilized in fracture treatment, and while the moleskin straps applied to the surface of the limb still have their place in practice, the introduction of methods in which a direct pull is obtained on the bone structure itself is a step in the right direction. The advantages of the direct traction are its efficiency (and there is no denying that a comparatively light weight of from 5 to 15 pounds usually provides effective extension) and its peculiar usefulness in fractures associated with extensive injuries of the soft tissues when surface traction is impossible. As is so often the case, there are some who carry direct traction too far, and others who have gone to the other extreme. They serve the natural purpose of indicating the middle ground.

Fig. 1.—Finochietto stirrup showing steel band alone and attached to rigid semicircular bar.

The Codavilla and Steinmann pins were designed and have been almost entirely used for continuous traction. In their application the pin is driven through the substance of the bone, and the various ice-tong modifications effect extension in it; only the pins, instead of being driven clear through the bone, penetrate only part way into the bone substance.

Fig. 2.—Finochietto stirrup looped over the superior surface of the os calcis in the concavity in front of the Achilles tendon.

The Finochietto stirrup (Fig. 1), on the other hand, was designed for temporary traction only. In order to obtain efficient traction in the operative reduction of fractures of the long bones of the lower extremity, Finochietto devised a steel band which he looped over the upper surface of the os calcis (Fig. 2). This proved to be a very successful method of pulling down and holding the fragments during the process of plating fractures. Chutro, an associate of Finochietto in Buenos Aires, appreciating its usefulness as a means of continuous traction, has since utilized it for that purpose, and I have had the opportunity to observe its practical application in a large number of cases on the service of Dr. Chutro at the Hospital Buffon in Paris. It was surprising what an effective means it was in the control of the fracture in those cases of military fractures associated with extension surface wounds.

Since then I have used this instrument in a number of cases. In every instance the traction has been satisfactory. The only difficulties experienced have been in passing the steel band so as to form a proper curve over the os calcis and the pressure of the band on the points of exit through the skin. In order to avoid these, I have combined the principles of both the pin and the steel loop. The Steinmann pin is employed to pass through the soft tissues just above the os calcis (Fig. 3) or through the substance of the bone (Fig. 4). To the pin as it emerges from the skin on each side is fitted a rigid stirrup. This serves to enclose the ends of the pin and prevent it from rocking or tilting. The stirrup is adjustable so that it will fit snugly against the sides of the foot. The exposed ends of the pin are kept sterile by the closed tubes which cover them.

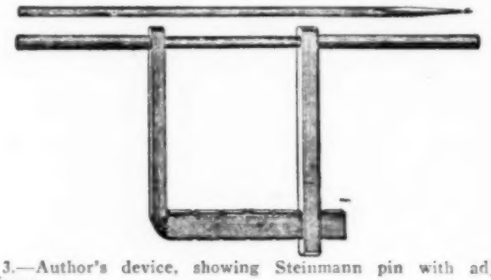


Fig. 3.—Author's device, showing Steinmann pin with adjustable rigid stirrup.

This apparatus is useful for continuous traction, especially in military fractures requiring open wound treatment. It is also useful for temporary extension in the reduction of both bones of the leg, in which it is so difficult to obtain effective traction and control. It may be employed as well in the operative reduction of fractures.

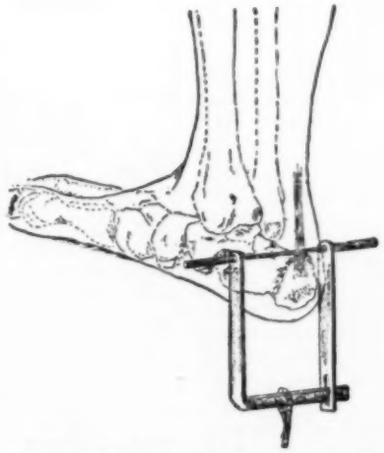


Fig. 4.—Author's stirrup, showing pin resting on upper margin of os calcis and rigid adjustable frame which covers the exposed ends of the pin and fits against the sides of the ankle, holding the pin from tilting.

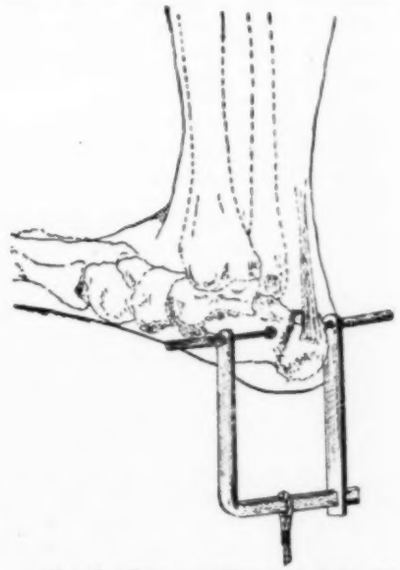


Fig. 5.—Same as Figure 3, with pin passing through substance of os calcis.

It has the advantage of being quickly and easily applied. To pass the sharp pointed pin directly through the tissues in front of the Achilles tendon is identical with the introduction of a large trocar. The tissues in this region are skin and connective tissue only, and if no incision is made, the skin

fits the pin tightly like elastic rubber dam, so that bacterial invasion is difficult.

When this instrument is used for simple reduction of fractures under ether, or as an aid in operation, the pin may be withdrawn after the plaster cast is applied. When it is employed for continuous traction, it is wise to enclose the *entire* apparatus in a voluminous gauze and cotton dressing, which acts as a bacterial filter. This is the method of Chutro and in contrast to the scanty protection frequently seen.

Two sizes of pins are used, the shorter one for the os calcis and a longer one for the femur or tibia.

THYROIDECTOMY BANDAGE

HENRY J. JOHN, M.D., CLEVELAND

The usual bandage used after thyroidectomies goes around the neck and crosses in front under the arms. It is a bandage *par excellence* for use in the operating room. After the first dressing, however, it has two defects: 1. It is uncomfortable, and patients complain of its cutting under the arms. 2. At each dressing the patients must be exposed, which is a still more weighty objection. It was with these two points in view that I devised a way to use a bandage which would be comfortable and stable, and would require no unnecessary exposure of the patient.

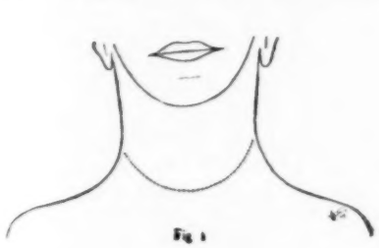


Fig. 1.

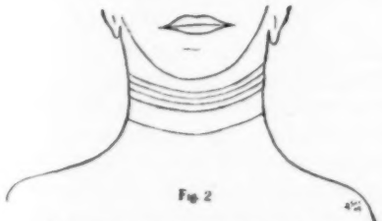


Fig. 2.

Fig. 1.—Usual low goiter incision.
Fig. 2.—Three rounds of circular 1½-inch bandage.

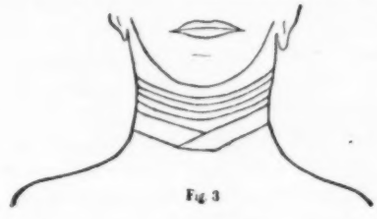


Fig. 3.

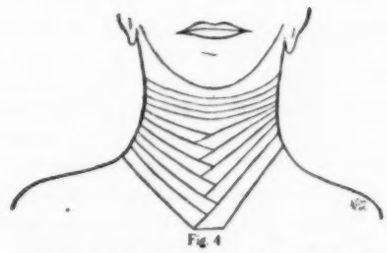


Fig. 4.

Fig. 3.—Starting the spiral reversed.
Fig. 4.—Bringing the spiral reversed low down on the chest.

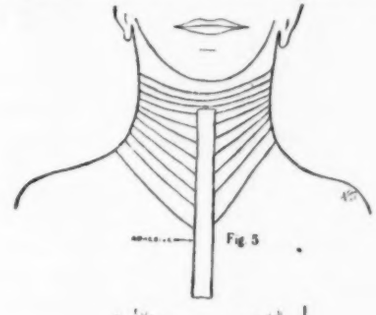


Fig. 5.

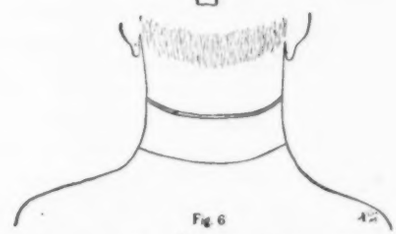


Fig. 6.

Fig. 5.—Anchoring with adhesive plaster. It is very important that the adhesive plaster should extend well below the bandage.
Fig. 6.—Rear view.

The bandage in itself is simple and needs no description. A width of an inch and a half makes a convenient size. While the plain circular bandage often used in cases of thyroidectomy may look satisfactory when it is first put on, it becomes loose in a short time and, slipping up on the patient's neck, exposes the wound. If the spiral is reversed in front and brought down in the center, the incision lies squarely in the middle of the finished bandage. The important step in the process is to anchor the bandage securely in front by placing the adhesive plaster in the median line below the point of the bandage. The adhesive strip thus secures all the individual turns and keeps them from pulling upward. The bandage will be quite secure, if the end of the adhesive plaster below it is sufficiently long.

In redressing incisions of this type it is not necessary for the operator to change the adhesive plaster but merely to peel it off the bandage, turn it down and use it again and again.

St. Vincent's Charity Hospital.

Health a National Duty.—Universal Public Health Service is the duty of the nation.—Connecticut *Health Bulletin*.

AN UNUSUAL CASE OF MALPOSITION OF THE APPENDIX

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Captain Medical Reserve Corps, U. S. Army

I was called, in this very unusual case, on the night of July 28. A boy, aged 4 years, with a good previous history, was found to be suffering from a typical acute attack of appendicitis, and was removed to the hospital for immediate operation. Under anesthesia the mass over McBurney's point was not only palpable but readily discernible by all present.

When the abdomen was opened, there was a slight flow of brownish fluid; the mass, which was discovered to be the head of the cecum, persistently protuded itself within the field of operation, so that it was necessary to enlarge the incision. Diligent and painstaking search for the appendix revealed only a perfectly formed cecum and ileum, but not a vestige of an appendix, not even a dimple on the cecum that might have revealed a possible collapsed or inverted appendix. The cecum and ileum could easily be defined; both were as smooth as any part of the adjacent intestine; there were absolutely no adhesions that might have buried a shrunken or shriveled appendix. In the mass, however, which was mobile within the abdominal cavity, and which could be grasped with the hand and easily brought within the boundaries of the incision, could be defined a smaller movable mass with its base attached to the cecum opposite the point usually occupied by the appendix. This I concluded to be the diseased appendix.

Believing that Nature would do what I had intended the operation to accomplish, I closed the abdomen after establishing sufficient drainage to guard against any possible outpouring of pus into the peritoneal cavity.

For the first three days following the operation, the patient was very ill; the pulse, temperature and respiration remained high, and for a while the patient's life was despaired of. On the fourth day, however, there was a copious discharge of a very offensive thick yellowish matter containing some blood, which was immediately followed by a drop to normal of all the symptoms.

From now on the patient's recovery was uneventful, save that, August 8, the day preceding his discharge from the hospital, there was found in the stool a yellowish-green slough about 2 inches long. This I took to be the sloughing gangrenous appendix.

An examination of the patient at his home in the country later found him well, and the mass entirely gone.

COMMENT

Adhesions around obliterating appendixes I have found to be common, and in some instances they have given the impres-

sion of nonexistence of the appendix. There are also cases on record of the entire absence of the organ; but in these cases either the patient was operated on for some other disease, or investigation was made postmortem.

A SIMPLE METHOD OF LOCALIZATION OF FOREIGN BODIES

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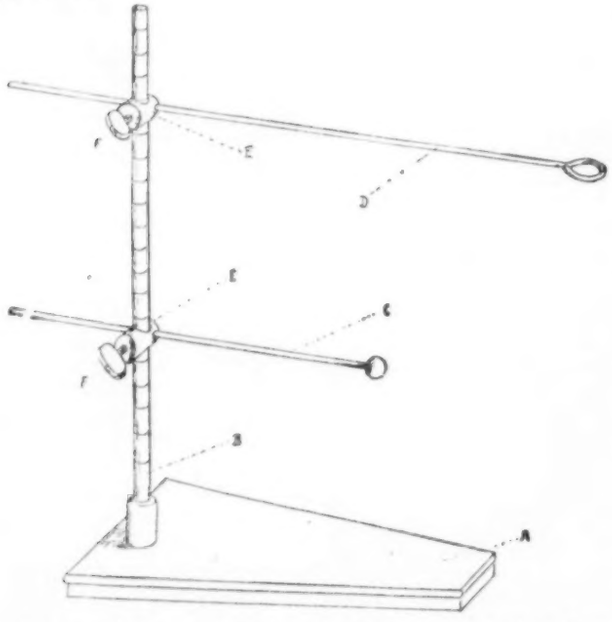
Late Radiologist, Washington University Medical School, St. Louis

One of the most important tasks in hospitals here is the localization of foreign bodies. Many methods are being used. The one which I am employing is to my mind the most simple and the most accurate. It involves the use of a small apparatus with an aluminum base which rests underneath the part of the patient which contains the foreign body, and an upright standard which rests on the broad end of the aluminum base. This standard has two adjustable cuffs through which pass two rods, an upper and a lower. The upper rod has a loop on its end; the lower, a small metallic ball. These rods are adjustable in two directions, and are secured by two set screws.



Apparatus for localization of foreign bodies: *A*, aluminum base; *B*, standard; *C*, lower adjustable rod with ball; *D*, upper adjustable rod with ring; *E*, lower cuff (adjustable); E, upper cuff (adjustable); *F*, lower set screw; *F*, upper set screw.

A patient is placed on the aluminum base (the tube, of course, being underneath the table), the foreign body is located, and by the central rays the loop is placed directly over the foreign body. After the loop on the upper rod has been placed close to the skin so that there will be no motion, the diaphragm is opened and the tube moved to and fro. The ball is then adjusted so that it moves in the same plane with the foreign body. The foreign body is thus localized in two directions, the ball locating it at the base line and the loop locating it in the upper plane.

There may be others who are using this method without the aluminum base on which the patient rests, but there is always a chance of slight displacement unless the localizer is held in position by the patient.

With this method one can, of course, make mistakes. But it is perfectly simple and is absolutely correct if the operator is careful, first, in posing his patient, and secondly, in observing the foreign body and ball until he is sure that they move in the same plane; otherwise he will find that there is a variation of from half an inch to 2 inches in the lower plane of his localization.

Military Medicine and Surgery

SOME OF THE ACCOMPLISHMENTS OF ITALIAN MEDICAL MEN IN THE WAR

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NEW YORK

It is generally understood that the Italian army at the present time consists of at least 4,000,000 men, and that the number of hospital beds is approximately 1,000,000. Just what it means in two years to expand a country's hospital service to these huge proportions can be better appreciated when it is recalled that in the entire United States, with a population almost three times as great as that of Italy, there are only 300,000 beds. Yet in spite of this vast achievement, the work accomplished by the Italian medical profession since the beginning of the war has attracted to itself but little attention in this country. The reasons for this are obvious. While probably none of the Allies who are fighting in Europe have received less aid other than financial help from outside their own borders, the medical men of Italy almost invariably were loath to speak of their achievements. There was no boastfulness anywhere. It is charateristic of the Italian medical service to achieve results and then perhaps talk about them. Nowhere did we hear of what the medical service was going to do. It was only of the things they had done of which they could be induced to speak. The equipment necessary for preventing disease and for the care of the sick and wounded has been provided almost entirely in Italy. In many instances establishments for the production of hospital and medical supplies did not exist at the outbreak of the war, and had to be created. Large institutions for the reeducation of the injured, that will compare favorably with the best, are in full operation. Hospitals rendering excellent service exist near the front-line trenches. New types of hospital construction have been evolved. Mobile hospitals of 100 bed capacity, which can be taken down and transferred 75 miles and set up and put in service again within twenty-four hours, are in use; the entire equipment, including the hospital furniture, instruments, operating room appliances, and roentgen-ray plant, is transported on five camions (motor trucks) and three touring cars. New operations, particularly in dental and lung surgery, new instruments and devices without number, have been developed. The following statement, although very incomplete, may convey some idea of what had been accomplished by the Italian medical profession prior to Oct. 1, 1917.

ORGANIZATION

The Italian medical service is presided over by an official who has his office with the minister for war at Rome. The service, however, is not so highly centralized as is the case in this country. There is a chief medical officer, common to all the armies, who has his headquarters near the front, at a point which is the principal center for the storage and distribution

of supplies, not only for the medical department, but also for the entire army. Representatives of the quartermaster's and commissary departments, of the signal corps, ammunition department, Red Cross, and other branches of the army, are located there. They dine together in a common mess hall and have ample opportunity for cooperation. Under the chief medical officer there is stationed with each army a principal medical officer who has almost determining powers in directing the medical work pertaining to the army with which he is stationed.

The care of the wounded at the front, as well as throughout Italy, is undertaken jointly by the Italian Red Cross and the Sanitare Militare, or Army Medical Service, medical aid being rendered through the following seven classes of agencies, which cooperate in passing back the wounded with a remarkable degree of efficiency, and may be considered in the order of their relative distance from the front-line trenches.

1. *The Posti Medicazione.*—These are the most advanced dressing stations for emergency services, and are located usually in dugouts in trenches very close to the front.

2. *The Sezione Sanita.*—From 1 to 2 kilometers behind the front, usually at a point which can be reached by an ambulance, are the Sezione Sanita, or dispensaries. They are more fully equipped than the preceding.

3. *Ambulancia di Montagna.*—These are located from 2 to 5 kilometers behind the front, and are the most advanced point reached by the Italian Red Cross.

4. *The Stazione di Sanita.*—These are somewhat larger and better equipped than the preceding. Tetanus antitoxin is usually given here.

5. *The Ospedale di Campo, or Field Hospitals.*—These are located in convenient and accessible points somewhat farther back. At the outset of the war these were of 50 bed capacity, but experience soon showed that it was frequently necessary that they be of 500 bed capacity. They are now also used as Smistamento, or distributing centers, at which patients are classified and sent to the various special hospitals.

6. *Ospedale di Tappa.*—These are base hospitals, and may be located several hundred kilometers behind the lines. They are usually grouped, so that in one village or town or area there may be a bed capacity varying from 20,000 to 40,000.

7. *Ospedale di Reservo.*—These hospitals are institutions or other large buildings located throughout the cities of Italy which have been made available for the reception of soldiers.

The whole question of handling the wounded is still in a transitional state. Many hospitals, however, have been actually brought near the front-line trenches.

For each army there are a number of large quarantine or disinfecting stations, equipped for the treatment and detention of soldiers that have come from areas in which dangerous communicable diseases have prevailed, as, for instance, cholera, malaria, dysentery and typhoid. These stations are provided with steam disinfecting apparatus or sulphur dioxid chambers, or other means for disinfecting clothing and equipment. Special effort is made to sterilize textiles that have become infected, and particularly those that may have become infested with body lice or their eggs. Every patient, before being admitted to one of the general hospitals, is detained at a quarantine station for a sufficient time to permit several microscopic examinations of the stool. All prisoners, likewise, are passed through stations of this kind.

HOSPITALS

Construction.—The hospital accommodation afforded by the Italian Red Cross consists largely of converted tourist hotels, schools and other large buildings that could be adapted to the purpose. The hospitals provided by the medical service of the army consist of existing army hospitals, many of which have been expanded, converted military buildings, or entirely new buildings erected for hospital purposes. The latter are usually one-story pavilions about 14 feet high, 18 feet wide, and of any desired length, constructed of angle iron placed on 6 foot centers, with the intervening space filled in with hollow tile. The tile resembles that used in fireproof construction in this country. The roofs also are of tile. Buildings of this type can be rapidly constructed, and hundreds of beds can be provided in a week or two. Over the course of a year or more, they are much cheaper than tentage. They are cool in summer and can be kept warm in winter. It is noteworthy that one seldom sees patients cared for in tents in Italy.

The decreased use of cavalry in this war has made available large numbers of cavalry barracks. These, when renovated, lend themselves to hospital purposes. At Udine, for instance, one of the cavalry barracks has been made into a single hospital ward with 300 beds. The proportions of this ward are immense. From one end of the room it is almost impossible to see a bed located at the other.

Hospital Locations.—Hospitals are being located nearer and nearer the front, as it has been deemed advisable to risk the occasional danger from shells, in view of the great advantage in having immediate treatment available for the injured. One finds these hospitals in most unusual positions. It was a novel experience to be taken 30 or 40 feet underground, and there, at a point directly over which a battle was raging, to see the regular hospital routine going on in good operating rooms supplied with artificial ventilation and modern hospital furniture, and, in general, admirably adapted to the purpose. To go to the other extreme, at an elevation of 6,000 feet in the Dolomites, we came on a hospital of 30 bed capacity hewn out of the side of a cliff. The two sides and back wall were of stone, and the mountain range at this point was so narrow that through a hole bored in the back wall of the hospital it was possible to look into the Austrian trenches on the other side of the mountain. This hospital may be said to be on the front-line trenches. The wounded that were able to travel after receiving emergency treatment were sent to the rail head on the marvelous teleferica, which often go from mountain-top to mountain-top over chasms thousands of feet deep.

Hospital Specialization.—Specializing has been carried to a high degree. For instance, at Udine we saw 1,500 fracture patients in a single hospital. At other hospitals we saw under treatment only patients with gunshot wounds of the chest. One hospital had 70,000

admissions during the month of August, which corresponded to a period of active offensive operations. Some of the hospitals are so large that a motor car is required to visit the various buildings.

Great progress has been made in developing the technic. We were told, for instance, that at the hospital in charge of Dr. Bastanelli, Professor Morelli has invented an improved aspirator for draining fluid from the chest. Pressure within and without the lungs can be accurately read on a gage, and through the development of special technic, which among other things permits the lungs to remain collapsed during definite periods, he has been able to produce some startling results in connection with lung surgery. Professor Morelli informed us that he had recently completed 100 cases with no mortality. He believed it to be entirely feasible to keep the mortality well under 5 per cent. in all gunshot wounds of the chest.

Roentgen-Ray Apparatus.—At the time Italy went to war few factories existed for the production of hospital and medical supplies. There was, for instance, scarcely a roentgen-ray apparatus in the country that had not been manufactured in Germany. At present, practically every hospital throughout Italy has one or more roentgen-ray machines, all manufactured in Italy. Not only is the apparatus as good as that formerly imported, but many competent observers believe it to be far superior.

TRANSPORTATION

Ambulance Service.—A remarkably efficient ambulance service has been established. With the exception of a few cars furnished through the British Red Cross, all of the ambulances have been supplied by the Italian Red Cross of the Italian government. Owing to the mountainous character of the service required, heavier cars have been found to be most practical. During active engagement the empty ambulances going to the front carry many additional stretchers. These are filled and placed in the empty camions that have taken ammunition or other supplies to the front. As a modern war is largely a problem in transportation, this reduces the number of vehicles, prevents congestion of the roads, and affords prompt service for returning the wounded from the most advanced points at the front.

Hospital Trains.—The smooth organization of the hospital train service was one of the most striking features that we saw in Italy. Both the Italian Red Cross and the Army Medical Service provide such trains. There is, indeed, considerable rivalry between these two organizations as to which can furnish the most prompt and efficient evacuation. In a number of instances we saw a train back into a side track next to a hospital, take on board fully 350 wounded, and in less than thirty minutes proceed on its way. There was no confusion, and everything seemed to work with clocklike precision.

NEW INVENTIONS

One is particularly impressed by the large amount of new apparatus that has been invented. Formerly Zander or similar apparatus mostly came from Germany. Not only are all these now manufactured in Italy, but a large number of new machines have been invented to meet the needs of war cripples. We saw an ingenious pneumatic tourniquet, new apparatus for jaw surgery, improvements in artificial limbs, and many other things too numerous to mention.

Reeducation Institutions.—The Rizzoli Institute in Bologna, created many years before the war, had considerable distinction for its prosthetic appliances and methods of reeducation for lost functions. Almost unbelievable progress in these directions has been made. The Regina Margherita Hospital, or institute for physical reeducation, in Rome, will compare favorably with the best of similar institutions anywhere. This institution has a capacity of 1,200 patients. Of these, 700 are in the physical therapy division. About 600 patients are discharged per month. Some of the passive exercise machines that have been developed are very ingenious. Great stress is laid on specialized forms of physical drill for rehabilitating nerve function. We were shown some truly remarkable results in this direction. The Villa Fiore, which belongs to the American Academy in Rome, has been set aside as an institute for mutilated soldiers. It is directed by Dr. Guali, who has devised most excellent improvements in artificial limbs. It is said that at the outset of the war practically all the limbs had to be purchased in America, but that now almost all are manufactured in Italy, at a great saving in cost. Dr. Guali has invented likewise an ingenious apparatus for registering the pressure of the artificial foot. This apparatus enables him so to modify the limb construction as to bring the pressure to bear similarly to that of the human foot. Certainly some of his results were most striking. At the Rizzoli Institute, in Milan, we saw a soldier who had been blinded in both eyes and had lost both hands, yet who, by the use of an apparatus devised especially for him, was able to use a knife, fork and spoon. At other institutions, after the lost function has been partially restored, a trade suitable to the condition of the individual patient is taught. Typewriting, printing, wood carving, lathe work, tinsmithing, basket making, and even primary education, are taught at these various places.

QUARANTINE STATIONS

In addition to the quarantine stations heretofore mentioned as being located in northern Italy directly in connection with the various hospitals at the front, there are in southern Italy huge quarantine stations which for size will probably long hold world records. Equipment for steam and sulphur fumigation, as well as detention barracks, have been provided. For instance, the French, in order to take care of the soldiers returning from the Saloniki and eastern fronts, have in southern Italy built a quarantine station for 40,000 persons. The British constructed a station for 20,000 soldiers for the same purpose. At these stations careful examinations are made for cholera, typhoid and dysentery carriers. Blood examinations also are made in order to detect malaria. Soldiers found infected are treated before being allowed to return to Great Britain or France. Italy has established huge stations for the return of her soldiers from Saloniki and Albania. When it is stated that over 100,000 malaria patients have been invalided back, the importance of these huge quarantine stations is at once manifest.

LABORATORIES

Laboratory work on a gigantic scale, and especially on the preventive side, has become an intimate part of the medical system in the present war. The examination of the stools for cholera, typhoid and dysentery has entailed an enormous amount of work. With the exception of the cholera imported into Italy at the beginning of the war through Austrian prisoners, that disease has not since made its appearance. Yet cholera carriers are constantly detected. This gives one an idea of the wonderful protection afforded by a modern health service.

TUBERCULOSIS

Considering the size of the Italian army, a comparatively small amount of tuberculosis has been encountered. It is stated that about 5,000 cases appeared among the 4,000,000 troops. However, it is said that more than 30,000 tuberculous Italian prisoners had been returned from Austria. The care of these patients is now receiving much earnest attention. Almost from the beginning roentgen-ray diagnosis was used in the detection of incipient tuberculosis. This form of diagnosis has now become a routine procedure. New recruits are carefully examined before being admitted to the army, and as rapidly as facilities permit, those suspected of being infected are examined with the roentgen ray.

RECLAMATION

Among other activities with which the medical service is associated is an active reclamation department. The variety and quantity of articles removed from a modern battlefield is almost unbelievable; it includes shoes, clothing, gas masks, first-aid packages, brass, shells, parts of guns, motor trucks, and almost every other conceivable thing. As soon as practicable after a battle, all this paraphernalia, or as much of it as possible, is collected from the field and taken to a central depot. Here it is sorted and sent to the various factories for repairs. Gas masks, for instance, are sent to a gas-mask repair factory, where the necessary mending is done and the masks reissued. Shoes are disinfected, cleaned and reissued. If in need of cobbling, two pairs of shoes are often made into one. The same obtains with regard to clothing. There are huge disinfecting plants and laundries in connection with these reclamation stations, for the treatment of articles for personal use. Most of the workers in these establishments are women, many of whom are recruited from among the fallen classes.

FIRELESS COOKERS

One of the striking features in connection with the provision of suitable food for the soldiers in the front-line trenches is the very general employment of huge fireless cookers. This enables the food to be prepared in permanent kitchens well behind the lines, and assures to the soldier absolutely hot meals, no matter how advanced the position in which he finds himself. Huge shops for repairing and retinning these cookers form part of the system.

PRISON CAMPS

The prison camps at the front consist of barbed wire enclosures with good tents and excellent cooking arrangements. They are divided into three sections. The first is the reception enclosure in which the prisoners are bathed and their clothing disinfected. They are then passed into the second enclosure, where stool specimens are taken for cholera, dysentery and typhoid. After three days' detention in the second enclosure, those whose stools are negative are sent into the third, where they remain perhaps several weeks until arrangements can be made to transfer them to permanent locations in the interior. For the officers, houses of a semipermanent character are provided. One is greatly impressed by the kindliness and consideration that are shown to the prisoners of all classes. The food is the same as given to the Italian officer or soldier of corresponding grade. No work is required of officers.

VENEREAL DISEASE

No actual official records dealing with venereal disease in the army were available. At the front, however, in each army there are special hospitals for the treatment of these patients. The officers and men are not permitted to associate with any women that are not under governmental supervision. The medical officers stated that venereal disease had been reduced to almost negligible proportions.

MEDICAL SCHOOL AT THE FRONT

Among many other novelties introduced by the Italian medical service is the establishment of a complete medical school near the front-line trenches. The character of the fighting up to the present winter has made this possible. From the beginning of the war to the autumn of 1917, practically all of the active military work was done between April and November. During the remaining months when the army was comparatively inactive, all the medical students that were serving in the hospital corps or other branches were ordered to San Giorgio di Nogaro, at which point professors from the various medical schools who are in the army also assembled. These professors were assigned to look after the sick in the vicinity of the school. This enabled them to use the clinical material for the benefit of the students. The buildings were mostly of temporary construction, but well adapted to the purpose. Enormous collections of bones and pathologic material generally, which had accumulated as a result of the war, were assembled here.

EFFICIENCY

Finally, it may be stated that we were much impressed by the excellent care given to the wounded, and the spirit of service manifested by the medical officers. They were on duty early and late, never sparing themselves, quick to meet emergent needs, and through it all a wonderful fellowship and mutual helpfulness prevailed.[1]

61 Broadway.

1. NOTE.—The American Red Cross Commission to Italy was composed of George F. Baker, Jr., John Morron, Nicholas F. Brady, Dr. Thomas W. Huntington and Dr. Victor G. Heiser. It sailed July 28, 1917, and returned to this country Oct. 22, 1917. After visiting institutions in England and France connected with the war, the commission was given unusual facilities for visiting the French and British fronts in France. It then spent five weeks in Italy studying the conditions to determine how the American Red Cross could render the most efficient aid in Italy. Several weeks were spent at the Italian front. Later visits were made to practically all the centers in Italy and Sicily at which the wounded were cared for. These extended visits enabled the members to gain personal first hand information and to form an idea of the value of the work of the Italians, compared to that seen on the French and British fronts.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

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SATURDAY, JANUARY 5, 1918

THE RENAL FUNCTION AND GOUT

At the conclusion of a comprehensive review of the subject, Lusk[1] has written that "present-day doctrines concerning metabolism in gout may shortly become entirely obsolete through new and far-reaching discoveries." Until recently, gout has been discussed primarily as a phenomenon of faulty metabolism. "Faulty metabolism of purins and their precursors" has been the offhand explanation of the mystery of gout with its manifestations of unusual retention of uric acid in the blood, its occasional deposits of urates in the tissues, leading sometimes to the formation of specific gouty nodules, and its acute inflammatory disturbances in the neighborhood of these tophi. Trauma, toxicity and infection are familiar detrimental agencies that have been called on at times to explain the gouty manifestations. Affinity of the tissues for uric acid (whatever that may mean precisely), increased formation of uric acid (which is now regarded as unlikely), and abnormal chemical union of uric acid and its consequent masked presence and retention in the blood are hypotheses that have vied with the contention of other anomalies in the purin metabolism of the gouty for recognition as causative factors.

Only a few years ago, Minkowski,[2] a competent worker in this field, wrote, "The ultimate cause of the unusual behavior of uric acid in gout is probably an abnormal metabolism within the nuclei of cells, where the nucleic acid content is the means of solution and conveyance not only of the purin bases but also of uric acid." In the same period, Garrod[3] was pointing out a different aspect of the subject. The occasional coincidence of nephritis (particularly contracted kidneys) and gout had already suggested that the cause of "uric acid stagnation" may reside in the kidneys. "If the fault is in the kidneys alone," Garrod incisively expressed it, "gout must be removed once and for all from the category of metabolic disorders and placed among the sequelae of renal inadequacy, at least so far as the uric acid phenomena of the disease are concerned."

At the Medical Clinic of the Peter Bent Brigham Hospital in Boston, McClure[4] has made further studies of the renal function in gouty patients with tophi in whom either the diagnosis of chronic nephritis was not made, or its presence was questionable. The newest technic permitting the detection of even incipient changes in excretory power, such as are indicated by very slight rise in nonprotein nitrogen in the blood, by the index of urea excretion, by the phenolsulphonephthalein test and by the relative fixation of the urinary constituents, was employed. From the cases thus carefully studied by McClure, it seems clear that the gouty kidney is often functionally deficient. The faulty elimination of exogenous uric acid and of other nitrogenous substances by gouty persons may be the result of depression of the functional power of the kidneys.

From these facts—they are not theories—it is evident, to quote McClure, that many of the findings that have heretofore been considered due to disturbances of nuclein metabolism in gout may be explained as the result of renal inadequacy, and that the theories concerning the etiology of gout remain hypotheses without satisfactory experimental bases. On the other hand, it must be admitted in all fairness, as McClure confesses, that while renal retention explains many of the anomalies occurring in the excretion of uric acid and of other nitrogenous substances in gout, nevertheless this does not explain the nature of gout, nor does it preclude the possibility of there being an underlying perversion of metabolism.

1. Lusk, Graham: Elements of the Science of Nutrition, Philadelphia, W. B. Saunders Company, 1917, p. 552.
2. Minkowski, O.: Von Leyden's Handbuch der Ernährungstherapie, 1904, **2**.
3. Garrod, A. E.: The Chemical Pathology of Gout, Brit. Med. Jour., 1904, **2**, 741.
4. McClure, C. W.: The Renal Function in Gout, Arch. Int. Med., November, 1917, p. 641.

DEATHS OF PHYSICIANS IN 1917

During 1917, the deaths of 2,300 physicians in the United States and Canada were noted in THE JOURNAL. On an estimate of 160,000 physicians, this is equivalent to an annual death rate of 14.37 per thousand. For the fifteen previous years the mortality rates were: 1916, 14.08; 1915, 15.71; 1914, 14.41; 1913, 14.64; 1912, 14.13; 1911, 15.32; 1910, 16.96; 1909, 16.26; 1908, 17.39; 1907, 16.01; 1906, 17.20; 1905, 16.36; 1904, 17.14; 1903, 13.73, and 1902, 14.74. The average annual mortality for the period from 1902 to 1917, inclusive, was, therefore, 15.53 per thousand.

Ages.—Of the decedents, 55 were between the ages of 21 and 30; 178 between the ages of 31 and 40; 367 between 41 and 50; 449 between 51 and 60; 503 between 61 and 70; 431 between 71 and 80; 170 between 81 and 90, and 27 between 91 and 100. The greatest mortality occurred at the age of 61, when 63 deaths were recorded.

Causes of Death.—There were 191 deaths assigned to general diseases; 246 to diseases of the nervous system; 296 to diseases of the circulatory system; 208 to diseases of the respiratory system; 86 to diseases of the digestive system; 115 to diseases of the genito-urinary system; 388 to senility; 31 to suicide; 111 to accident; 23 to homicide, and 66 after surgical operation. Among the principal assigned causes of death are senility, 388; heart diseases, 202; cerebral hemorrhage, 195; pneumonia, 189; accident, 111; nephritis, 86; surgical operation, 66; tuberculosis, 44; malignant disease, 40; suicide, 31; arteriosclerosis, 30; angina pectoris, 29; septicemia and homicide, each 23; diabetes, 22; uremia, 17; gastritis, myocarditis and appendicitis, each 16; intestinal disease (unclassified) and influenza, each 14; anemia and typhoid fever, each 13; meningitis and brain disease (unclassified), each 11; influenza, nervous disease (unclassified) and kidney disease (unclassified), each 10; erysipelas, 8; endocarditis, cholelithiasis and peritonitis, each 7; embolism, asthma and respiratory diseases (unclassified), each 6; neuritis, gastric ulcer and liver disease (unclassified), each 5; rheumatism, leukemia, bronchitis, cirrhosis of the liver and dilatation of the heart, each 4; dysentery and spinal disease (unclassified), each 3; malaria, diphtheria, paresis, general paralysis of the insane, pleurisy, hernia, intestinal obstruction, duodenal ulcer, prostatitis and dropsy, each 2, and 1 death each from anthrax, pellagra, chronic articular rheumatism, insanity (unclassified), paralysis agitans, anterior poliomyelitis, ear disease (unclassified), mastoiditis, aneurysm, lymphatic disease (unclassified), pulmonary emphysema, and purpura hemorrhagica. One physician died in prison, and seven medical officers lost their lives in battle.

The causes assigned for the 111 deaths from accidents were: automobile, 41; falls, 11; railway-automobile (grade crossing), 9; railway, 9; drowning 10; firearms, 8; poison, 4; burns, 6; sunstroke, 4; freezing, 1; lightning, 1; explosion, 1; electricity, 1; machinery, 1; horses and vehicles, 1; other accidental traumatisms, 3, and suffocation, 1. The 31 physicians who ended their lives by suicide selected the following methods: firearms, 15; poison, 5; hanging, 2; cutting instruments, 3; drowning, 1; jumping from high places, 1, and other means, 4. Of the 16 homicides, 11 were due to firearms; 2 to cutting instruments, and in 3 the method was not reported.

The chief death causes in the order named were senility, heart disease, cerebral hemorrhage, pneumonia, accident, nephritis and surgical operations. The age at death varied from 21 to 100, with an average of 60 years, 8 months, 13 days. The general average of age at death since 1902 is 59 years, 9 months and 2 days. The number of years of practice varied from 1 to 70 years, the average being 32 years, 7 months and 1 day. The average for the past thirteen years is 31 years, 2 months and 11 days.

Military Service.—During the year, 215 physicians died who had served in the Civil War; of these, 59 had followed the fortunes of the Confederacy, and 61 had been medical officers of the United States Volunteers. The Medical Corps of the Army lost 10 officers; the Medical Reserve Corps, 20; 15 had been contract or acting assistant surgeons, and 2 were medical cadets. The Navy lost 14 medical officers; the Public Health Service, 7; the Indian service, 3, and the organized militia, 31, of whom 5 had attained the grade of Surgeon-General.

Civil Positions.—Of those who died, one had been a member of Congress; one, the governor of a state; one, an ambassador; 11, members of state senates; 34, members of the lower houses of legislatures; 38 had been mayors.

Association Fellowship.—Of the 689 Fellows of the American Medical Association who died during 1917, two had been vice presidents; one, a member of the House of Delegates; two, members of the Committee on National Legislation; one, a member of the Council on Pharmacy and Chemistry, and one, a member of the Board of Trustees.

HAMSTRINGING THE ARMY

The forces arrayed against scientific medicine are many and various. They range from the honest but deluded crank with an obsession through the various cults and 'pathies to the downright quacks and medical fakers. The American Medical Association as representative of scientific medicine in this country has, naturally enough, been the target for many of the verbal poison-gas attacks made by these different interests. In general, the Association and the profession have ignored such outbursts, for in many instances one of the obvious objects of the attackers has been to obtain, through a reply, a publicity they could never get through the avenues normally open to them. In this matter, as in many others, war brings about changed conditions. Vilifying scientific medicine in times of peace was a matter that affected chiefly only the physician, and he, knowing its source, ignored it. With the entry of our country into war, medicine, in common with other sciences, was called on to do its "bit" in successfully prosecuting the gigantic task the nation had undertaken. How well it has responded we will leave others to say. The facts are that the lives and health of the hundreds of thousands of young Americans who form the new National Army have been entrusted to the care of the representatives of scientific medicine.

During the past few months there has been an especially virulent effort on the part of the opponents of modern medical science to discredit that science in the

eyes of the American public. Not only has it been openly charged that the physicians in the Army are incompetent to care for the health of the soldiers, but the villainous accusation has also been made that much of the sickness in the camps is the result of the prophylactic inoculations given the men at the time they entrain. These charges, of course, emanate chiefly from ignoramuses of the "drugless healer" type. Such a campaign may be counted on not only to weaken the confidence of the American public in the medical department of the Army, but also to arouse unfounded suspicions in the very integrity of the military organization.

These thoughts are suggested by a recent article appearing in the Los Angeles *Times*. While the advertising pages of the *Times* are a notorious haven for quackery, the paper generally is supposed to have some influence. One of the departments of the Sunday editions of the *Times* is entitled "Care of the Body," and is conducted by one Brook who calls himself a "Doctor of Naturopathy." It would probably be difficult to put in the same space more misinformation regarding the human body and its processes than Brook manages to condense into his "department." The *Times* seems to have two obsessions, an undying hatred of labor unions and a deep-seated antipathy to the medical profession and medical science. This may explain why its alleged "health department" is turned over to a quack who also advertises his trade in the same paper.

In the *Times* for December 16, Brook suggests, both directly and by inference, that the cases of measles and pneumonia that have occurred in the various Army camps are "in part at least . . . due to the fact that their [the soldiers'] blood has been poisoned with injections of diseased animal matter . . ." In the same article Brook denies that medicine has progressed since the days of Hippocrates; he declares that "all disease has one cause, the accumulation of waste matter in the blood, due to surplus by-products of food"; that epidemics "occur when atmospheric conditions are favorable to them"; that "tertiary syphilis is mainly due to mercurial poisoning"; that physicians "of the regular school do not understand disease"; that pathogenic bacteria are never the cause, but always the result, of disease; that "the percentage of deaths from diphtheria is as large as it ever was"; that the "increase in cancer is attributed by some medical men to the general use of serums"—and so on *ad nauseam*.

The article can have only a pernicious and disquieting effect, not alone on the soldiers themselves, but also on their families and friends. Had the *Times* falsely charged that our soldiers were being sent to fight Germany armed only with old-fashioned muskets or blunderbusses; or had it charged that the warships of the United States Navy are so obsolete and old-fashioned as to imperil the lives of our sailors, that paper would have played into the hands of our enemy no more effectively than it does when it spreads broadcast ignorant slanders regarding the efficiency of modern medical science and attempts to discredit the modern physician and challenge the value of the service rendered by the Army Medical Corps.

If modern medical science is a pretense and a sham, if inoculations against typhoid and smallpox are mere dangerous fads, if the health and lives of our brothers and sons who have been called to the colors are not in safe hands, then, in the name of common sense let us abolish the medical department of the Army and substitute instead a corps of chiropractors, naturopaths, mental healers and what-not in its place. If, on the other hand, the value and effectiveness of antityphoid inoculation and vaccination have been demonstrated and if everything is being done that modern science can do for the health of the Army, then those sheets that are attempting to disseminate falsehood to undermine the morale, not only of the Army, but of the public, and in other ways give aid and comfort to the enemy, should be promptly suppressed by the government.

INTESTINAL BACTERIA IN CHILDHOOD

The harm that some bacteria can bring about when they find their way into the organism by way of the digestive tract is so indisputable and emphatic that there has resulted a tendency to view all micro-organisms in the gastro-intestinal canal with some suspicion. Our readers are familiar with the widespread attempts in recent years to implant one type of micro-organism in the alimentary tract in the hope that it may lead to the repression or exclusion of a less desirable type. If the strictly scientific evidence for the success of such an undertaking as the implantation of the *Bacillus bulgaricus* or the *Bacillus acidophilus* on the intestinal mucosa has not been convincing, certainly the semipopular literature and the advertising propaganda have almost sufficed by mass action to enforce a respectful attitude or even a favorable impression toward the situation.

The feces literally swarm with bacteria. Osborne and Mendel[1] have oberved, for example, that 70 per cent. of the nitrogen in the feces of animals may be attributable to bacteria. Obviously it is important to know how this omnipresent flora is modified by diet alone, and what changes the bacteria inevitably ingested with food may occasion, before emphasis is placed on a single factor responsible for the type of alimentary bacteria found under any given condition. This is particularly true of children, in whom special bacterial conditions are often held responsible for the pathogenesis of various disorders. Only lately, for

1. Osborne, T. B., and Mendel, L. B.: The Contribution of Bacteria to the Feces after Feeding Diets Free from Indigestible Components, Jour. Biol. Chem., 1914, **18**, 177.

example, Hess[2] has maintained that infantile scurvy is an intestinal intoxication or an autointoxication due to the overgrowth of harmful bacteria in the intestine. It is the product of an unbalanced flora that is no longer controlled by a proper dietary. Furthermore, the comparatively simpler character of the diet of children makes it easier at their age to inquire to what extent differences in the bacterial flora of children can be correlated with the type of food forming the sole or the chief ingredient of the diet.

As the result of a study of the dejecta of children and their foods at the Johns Hopkins medical laboratories by Ford, Blackfan and Batchelor,[3] it was found that the bacteria with which the food is infected are almost the same as those found in the dejecta of the children fed on these foods. *Bacillus cereus* and *B. albolactus* are the most common, while *B. mesentericus* and *B. pseudotetanus* also appear. The relative proportion of the species encountered in the food is also strikingly similar to that established for the dejecta. Pasteurized milk, protein milk, buttermilk and farina were used extensively in the children's hospital. All these articles of diet were found to be infected with aerobic, spore-bearing bacteria, the spores of which are capable of withstanding the heat employed in ordinary cooking. The bacteria found in protein milk and in buttermilk were especially abundant, *B. cereus* and *B. albolactus* being the predominant types. In the heated milk they were somewhat less common, the same species predominating. Farina was relatively free from bacteria, and in the samples examined contained chiefly pseudotetanus bacilli.

The Baltimore investigators incline to the opinion that the presence of aerobic spore-bearing bacteria, gram-positive in character, in the dejecta of children is to be attributed to their mechanical introduction with the richly infected food. They state that the presence of normal, constipated or loose stools in cases in which there is a great increase in aerobic spore-bearers indicates that these organisms may be regarded as practically harmless in the alimentary canal, even if they are present there in large numbers. Hence the warning that one should be extremely cautious in drawing any conclusions that have a clinical bearing from a bacteriologic examination of the dejecta, unless a study of the bacteria in the ingested food is made at the same time.

2. Hess, A. F.: Infantile Scurvy, V, A Study of Its Pathogenesis, Am. Jour. Dis. Child, November, 1917, p. 337.
3. Ford, W. W.; Blackfan, K. D., and Batchelor, M. D.: Some Observations on Intestinal Bacteria in Children, Am. Jour. Dis. Child., November, 1917, p. 354.

Hookworm in Siam.—For the six months ending Aug. 31, 1917, Dr. M. E. Barnes of the International Health Board reports that 7,577 persons in Siam were examined for hookworm, of whom 5,669 were found to be infected. Of these, 3,614 were treated. Lectures on sanitation have been given and literature distributed. The work has had the approval of the Siamese director of health.—*Commerce Reports.*

Current Comment

THE PAPAW AND ITS FOOD VALUE

In magazines and newspapers, on billboards and street car signs, in fact, everywhere, we are being told that food will win the war. While it will, of course, take something more than food to accomplish this purpose, at the same time this is an immediate need; consequently more thought is being given to food than ever before, and a general survey is being made of the fruits of the earth to learn whether any food substances have been overlooked. Langworthy and Holmes[1] of the Department of Home Economics have made an investigation of the American papaw, a fruit which they state has heretofore been used as a food only in certain localities in which it has grown practically wild. They believe that it deserves further consideration. The name papaw is applied to two distinctly different fruits, both grown in the United States—one, the native American papaw and the other, the fruit of the tropical American tree. From the earliest times, *Asimina triloba,* the native American papaw, has been used as a food in this country in those regions where it is grown. The fruit is little known, however, at any distance from these regions. This, Langworthy and Holmes point out, is because it is not considered edible until fully ripe, the flesh being very soft and easily bruised, thus interfering with its shipment. The fruit ripens in September, remains in good condition only a short time after it is picked, and, as stated, does not stand well either transportation or storage. It has generally been considered a wholesome fruit, although some cases of poisoning (none of them fatal or even very serious) have been reported. Barber[2] believes that these cases represent an idiosyncrasy to the fruit, as the poisoning was accompanied by urticaria and other symptoms of that type. Langworthy and Holmes have considered it worth while to make a determination of the dietetic value of this fruit, to test its table and culinary qualities in order to find out whether it offers possibilities for more extensive use. They find that the protein content is noticeably high, while the content of food carbohydrates and ash is within the range for other fruits. The fuel value, as ordinarily calculated, is 445 calories per pound, about the same as that of bananas and more than that of plums, prunes, apples and similar fruits. Samples of the papaw were eaten freely by members of the laboratory staff of the office of home economics, and were found to cause no digestive disturbances whatever. The fruit was cooked in several ways in the laboratory. It was found that heating methods do not yield satisfactory results, as cooking develops a pronounced and not agreeable flavor which differs from that of the fresh fruit. Frozen and chilled dishes made with the papaw were quite satisfactory and agreeable. Concerning the latter, the authors are of the opinion that, considering the composition of the fruit, its distinctive flavor and pleasing texture, it

1. Langworthy, C. F., and Holmes, A. D.: The American Papaw and Its Food Value, Jour. Home Economics, 1917, **9**, 505.
2. Barber, M. A.: Poisoning Due to the Papaw (Asimina Triloba), THE JOURNAL A. M. A., Dec. 30, 1905, p. 2013.

seems to deserve the good opinion in which it is quite commonly held in regions where it is abundant. It is certainly worth further consideration as an addition to the restricted diet which may become general during the war.

HOMICIDES IN THE UNITED STATES

The United States has anything but an enviable reputation as regards its homicide record, especially in large cities. That the evil is increasing is evident. It has been estimated that no fewer than 7,500 deaths occur annually in this manner in the United States. According to newspaper reviews for 1917, there were over 9,000 such deaths during the past year. Frederick L. Hoffman[1] has recently made an analysis of the records for the last decade in thirty-one American cities, and he shows that the tendency has been to increasing numbers of such deaths rather than toward any lessening either in the total number or the rate. As has been the case in former years, the highest homicide rate prevails in Memphis, Tenn., the rate having increased from an average of 74 per hundred thousand in 1906-1910, to 89.9 in 1916. How bad this record is may be seen from the fact that the city with the next highest rate, Atlanta, Ga., has a record of 31 per hundred thousand. The five American cities with high records are all in the South; two, Memphis and Nashville, are in Tennessee, the others being Atlanta, Ga., New Orleans, La., and Charleston, S. C. For this reason it is naturally of interest to know to what extent the negro population is concerned. Hoffman calculates that the average white homicide rate in the Southern States is 6.3 per hundred thousand population, against 30.4 for the colored. This does not mean, however, that the excessive homicide rate of Memphis is entirely attributable to the negro element, since an analysis of these figures for Memphis shows that the white rate during the last five years was 26.7 per hundred thousand population, contrasting with the homicide rate of the city of New York of 5.4 for the same time. However, the colored rate in Memphis is steadily increasing, from 99.9 in 1912 to the well-nigh incredible figure of 178.4 in 1916. Even Nashville, which approximates it in population and location, has rates of but 17.7 for the white and 66.3 for the colored as averages for the last five years. An analysis of homicides by method showed that 13,579 of the homicides for 1911-1915 were by firearms, 3,260 by cutting or piercing instruments, and 5,106 by all other methods. The male homicide rate during the period was 10.7, as against a female rate of 2.9, and the male rate for firearms was 6.9, against a rate of 1.5 for females. It is possible to draw a number of conclusions from these figures. Certainly they indicate, as Hoffman says, "the practical value of more effective restrictions on the use and possession of firearms, and the urgency of more drastic methods of police supervision and control." It is generally known that the supervision over the sale of firearms in most American communities is negligible. The laws governing their sale are not sufficiently stringent in their requirements, and the enforcement of the laws is so inadequate as to make the laws practically worthless. The second conclusion is that murder trials are unduly prolonged in this country, that the public gives the weight of its endorsement to wrongful actions, and thus the tendency to murder in American cities is greatly encouraged.

1. Hoffman, F. L.: Homicide in American Cities, 1916, the Spectator, Dec. 20, 1917.

LAXATIVE FOOD PREPARATIONS

Tradesmen, as a rule, are quick to grasp any opportunity for profit offered by the changes in habits and tastes and likewise by the more common physical ailments of the population. The "patent medicine" business bears eloquent witness to the truth of this remark. Modern dietary habits, accentuated by the increase in sedentary occupations, have brought the manifestations of constipation into prominence. The American is prone to seek relief in some familiar laxative prescription; and the manufacturer has been equally quick to provide a ready purchaser with the object of his desires. Thus has come about the great profusion of laxative pills and potions advertised in glowing terms to bring the sought relief and to avert an alleged impending doom. There are fashions in laxatives as in many other features of life. When the rôle of the diet in the movement of the bowel became better understood, dietary regulation of this function came into vogue more conspicuously. The part played by the indigestable "roughages" in the ration served to direct attention to the intentional use of such materials. Within a surprisingly short time, bran, the poorly utilized milling residue of wheat, has achieved a popularity as well as scientifically fostered reputation as an aid in combating constipation. Beside bran, used either alone or in combination with other materials, agar-agar and possibly other substances containing indigestible polysaccharid carbohydrates, likewise used either alone or combined with some cereal food, are now on the market. Bran, bran biscuits, laxative biscuits, "health biscuits" are terms employed in the exploitation of the products, some of them not without merit. According to analyses made by Street,[1] at least half a dozen agar-containing products are now being offered for sale, and an even larger number whose name clearly indicates the presence of wheat bran. These, says Street, show a considerable range in composition. All are clean and suited for human consumption. The content of crude fiber on which their laxative efficiency primarily is assumed to depend, ranged from 3.8 to 8.5 per cent. By way of criticism, Street remarks that the majority of these laxative preparations are relatively expensive. The cost of the samples analyzed ranged from 8 cents to $2.76 per pound, and there was no evidence that the higher priced brands are any more effective than the cheaper ones. The wheat brans examined showed a range of cost from 6.5 to 20.5 cents per pound, showing — to quote Street—either the one to be an extremely reasonable purchase or the other a grossly extravagant one.

1. Street, J. P.: Laxative Food Preparations and Their Composition, Mod. Hosp., December, 1917, p. 398.

Medical Mobilization and the War

MEDICAL PROMOTIONS ANNOUNCED BY GENERAL PERSHING

The War Department announces the following recommendations for promotions, cabled by General Pershing: Lieut. M. P. Lane, M. R. C., to be captain; Lieuts. C. W. Presnall, M. C., E. B. Maynard, M. C., and A. Freer, M. C., to be captains; Lieuts. H. E. Ross, M. C., and A. W. Kenner, M. C., to be majors.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND WELCOMES AMERICAN MEDICAL OFFICERS

At a stated business meeting of the president and fellows of the Royal College of Physicians of Ireland, held on Friday, Dec. 7, 1917, it was unanimously resolved that all the officers of the United States Medical Service while stationed in Dublin and its neighborhood should be cordially invited to make use of the college library. The president and fellows expressed a sincere hope that the officers of the United States Army Medical Service will make as free use as they desire of this invitation.

NAVY MEDICAL DIRECTORS PROMOTED TO REAR ADMIRALS

In recognition of their distinguished services, President Wilson will recommend to Congress the promotion of Medical Directors George H. Barber and Edward R. Stitt to the rank of rear admiral, according to an announcement by Secretary Daniels. Dr. Barber, noted for his work in tuberculosis, is a graduate of the College of Physicians and Surgeons of Columbia University, and entered the Navy as assistant surgeon in 1889. He has served many years at sea and has had service at training stations and hospitals both in the United States and the Philippines. He has for the past several years been head of the naval hospital at Las Animas, Colo. Dr. Stitt, author of a text and known for work in bacteriology, pathology and tropical medicine, is a graduate of the University of South Carolina, and received his degree of M.D. from the University of Pennsylvania. He also entered the Navy as assistant surgeon in 1889 and has since held several important government positions, being at present a member of the National Board of Medical Examiners. He has been connected with the Naval Medical School at Washington since it was established in 1902, and is at present president of that institution.

THE MEDICAL BULLETIN

The first number of a new publication entitled *The Medical Bulletin*, to be a review of war medicine, surgery and hygiene, published by the American Red Cross Society in France, has just appeared. It is dated November, 1917, and opens with the announcement of the appointment of a research committee of the American Red Cross in Europe. This committee consists of Capt. Walter B. Cannon, chairman; Capt. Kenneth Taylor, secretary; Majors Joseph A. Blake, G. W. Crile, H. Cushing, H. T. Nichols, Richard P. Strong and Alexander Lambert, Col. M. W. Ireland and Drs. James A. Miller, Homer Swift and William C. White. The address of the secretary of the research committee is 6, Rue Piccini, Paris, XVI. A central laboratory in Paris has been established at the Red Cross Military Hospital at the same address, which will cooperate with the present laboratory there established under the Robert Walton Goelet Research Fund.

In order to provide for meetings, a research society has been founded to meet once a month in Paris, and the *Medical Bulletin* has been established to review medical literature. The *Bulletin* will contain abstracts of papers read at the monthly meeting of the society and also of articles appearing in English, French and American medical journals. A library of current medical journals has also been established at the office of the *Bulletin*. The publication will be issued monthly, and will be available for the physicians and surgeons with the American Army in France, and for those of our allies who may find it helpful. It will be furnished without charge to the officers mentioned.

The matter appearing in the *Bulletin* is classified under surgical, medical, radiologic, bacteriologic, nervous and mental, and skin and genito-urinary. It contains a translation of the conclusions adopted by the Inter-Allied Surgical Conference held in Paris in April, 1917, fourteen surgical abstracts, one radiologic, two medical, one bacteriologic, two nervous and mental and two skin and genito-urinary abstracts. Of these abstracts, two are from THE JOURNAL, eight from the *British Medical Journal*, three from the *Lancet*, one from the *Archives of Radiology*, three from the *British Journal of Surgery* and five from the *Archives de médecine et de pharmacie militaires*.

REGULATIONS GOVERNING ENLISTMENT OF MEDICAL STUDENTS AND HOSPITAL INTERNS

Medical Students

Medical students should enlist in the Medical Enlisted Reserve Corps before the time expires for filing their questionnaires with the local boards. For the purpose of expediting this matter, authority has been granted to recruiting officers of the Army to accept properly accredited medical students from well recognized schools and to enlist them in the Medical Enlisted Reserve Corps. The Surgeon-General's Office has notified the deans of medical colleges that it would facilitate matters if a supply of enlistment papers were obtained from the nearest recruiting station. Physical examination of students may be made by any medical officer of the Army, and if satisfactory, the student would then present himself with his application, the dean's affidavit and the report of his physical examination, to the nearest recruiting officer, who will enlist him. If the physical examination is not satisfactory, all the papers should be sent at once to the Surgeon-General for the consideration of the waiving of minor physical impairments.

NECESSARY PAPERS

The application should be a written application for enlistment in the Medical Enlisted Reserve Corps, addressed to the Surgeon-General. It should give the student's full name and address, the name of the medical school and the class of which he is a member, the address and number of his local board and his "order number" in the draft. It should be accompanied by an affidavit from the dean or his authorized agent, which must be duly executed before a notary. This should state that the student is a bona fide student in the school, and must specifically mention the class of which he is a member for the session of 1917-1918.

PROCEDURE

After enlistment in the Medical Enlisted Reserve Corps, the student may fill out the questionnaire when it reaches him, placing a cross in column "A" opposite "D" in Class V on the first page, and specifically claim deferred classification by answering the question at the bottom of the first page. He will then complete the required parts of the questionnaire, especially paying attention to Series VI—military or naval service. Members of the Medical Enlisted Reserve Corps are entitled to place in Class V. The effect of such classification is to grant exemption or discharge from the draft.

Hospital Interns

A hospital intern who is a registrant and therefore liable to call to military service by his local board, may either apply for a commission in the Medical Reserve Corps directly to the nearest examining board for the Medical Reserve Corps; or, if he has an "order number" low enough to make him liable to early call, he should apply at once for enlistment in the Medical Enlisted Reserve Corps. Such enlistment, if accomplished before he receives and answers his questionnaire, will enable him to state on the questionnaire that he is in the military service, and he will in consequence be placed in Class V. This enlistment will be equally effective as a commission in enabling him to continue his intern service, and will not prejudice his right to apply for commission at a later date.

NECESSARY PAPERS

In the case of interns, the application for enlistment in the Medical Enlisted Reserve Corps should be made directly to the Surgeon-General and not to an enlisting officer (as in the case of medical students). The application should include the full name of the intern, his age, the name and address of the hospital in which he is serving his internship, the date when such intern service began, the medical college from which he received his degree of M.D., and the date of graduation, the number and address of his local board, and his

"order number" before such board. This application must be accompanied by an affidavit from the executive officer of the hospital which gives the following information: the position held by said executive officer; the name and address of the hospital; a statement that the intern (giving full name) is a bona fide intern in said hospital, and that he is devoting his entire time to this work; the date on which said intern began his service, and the date when his service as intern will end; the daily average number of patients in the hospital; the total number of interns in the hospital; and the number of interns who are already in the military or naval service of the United States, either as commissioned officers or enlisted men.

The affidavit shall further contain this agreement: "At the termination of the intern service of (name), whether on or before the date mentioned as the termination of his appointment, I agree to notify the Surgeon-General by letter."

QUALIFICATIONS OF INTERNSHIP

Internships are limited to one year. An intern who has already served one year or more as such will not be approved for enlistment in the Medical Enlisted Reserve Corps. He may, if he wishes, apply for a commission in the Medical Reserve Corps, but with the expectation that he will be called to active duty as soon as needed. An intern who, when he is commissioned or enlisted, has already served as an intern for part of a year, will be authorized to remain on inactive duty only for the balance of the period of one year, and may be called to active duty thereafter, if needed, irrespective of the duration of his appointment as intern.

The internship should begin as soon as possible after graduation. In the following provisions the reckoning of time shall be from the last day of that month in which the degree of M.D. is conferred. For one month from that time a free choice from available internships in approved hospitals will be allowed. No internship will be approved which begins later than four months from that time. If the internship begins between one and four months from that time, approval will be given only when the Surgeon-General is satisfied that the time intervening between graduation and the internship will be spent in a way that will improve the training of the graduate for Army purposes.

In the execution of these regulations the department will not recognize internships in hospitals, sanatoriums or other institutions conducted for profit; or in small private hospitals (50 beds or less); or new internships at any hospital, if established or added since May 18, 1917, to those previously existing, unless such new internships are necessitated by and are proportional to an increase in the bed capacity of said hospital.

Within the restrictions set forth in the above regulations, a commissioned officer of the Medical Reserve Corps, or an enlisted man in the Medical Enlisted Reserve Corps, may apply for a position as intern, and may accept such position subject to the later approval of the Surgeon-General. In making such engagement with the hospital authorities, it should be clearly understood that the applicant for internship is in the military service; that he is subject to orders of the Surgeon-General; and that he may be called to active duty at any time, should the exigencies of the service demand such action.

PERMISSION FOR INACTIVE DUTY

On receiving such appointment as intern, the commissioned officer or enlisted man should at once apply to the Surgeon-General for permission to be continued on inactive duty during the period of his internship, giving his address, and stating the name and location of the hospital from which he has received his appointment, and the date when the internship will begin.

On the receipt of this request, the Surgeon-General will forward to him three affidavits—one a formal application blank to be completed by himself, the second to be filled out by the executive officer of the hospital, and the third to be filled out by the dean of the medical school or by his authorized agent. These should be completed and returned together by the applicant to the Surgeon-General as soon as possible. When the time of appointment and of beginning service are near together, the applicant may apply to the Surgeon-General in season to receive these forms early enough to have them completed and forwarded immediately after the appointment is made.

If the application is approved, two certificates will be sent to the applicant, authorizing him to remain on inactive duty during his internship. He will retain one copy and deliver the other copy at once to the executive officer of the hospital.

The continuance of this permission to remain on inactive duty is conditioned on the performance of his duties in a manner satisfactory both to the Surgeon-General and to the authorities of the said hospital.

INTERNS MUST REPORT

During his internship reports shall be made to the Surgeon-General by the intern as follows: a report of the fact, when he begins his service, this report to be countersigned by the executive officer of the hospital; a report at the end of each period of three months thereafter, with a statement of the character of the work for that period, and an affidavit from the executive officer of the hospital that he has given his entire time to his duties as intern and that his work has been satisfactorily performed; a notice of the termination of said services as intern whenever it may occur.

DISEASE CONDITIONS AMONG TROOPS IN THE UNITED STATES

Extracts from Telegraphic Reports Received in the Office of the Surgeon-General for the Week Ending Dec. 21, 1917

1. Annual admission rate per 1,000 all troops in U. S. (disease only) 1586.4
   Noneffective rate per 1,000 on day of report 41.9
2. National Guard—
   Admission rate per 1,000 all divisions (disease only)..... 1621.8
   Noneffective rate per 1,000 on day of report 47.8
   Divisions showing admission rate for disease higher than average: Camps Doniphan, Bowie, Kearny, Cody, Wheeler, Beauregard and Shelby.
   Divisions showing noneffective rates higher than average: Camps Bowie, Kearny, Beauregard, Wheeler, Doniphan, Shelby, Cody and MacArthur.
3. National Army—
   Annual admission rate per 1,000 all divisions (disease only),. 1786.6
   Non-effective rate per 1,000 on day of report (all divisions).. 41.8
   Divisions showing admission rate for diseases higher than average: Camps Travis, Pike, Funston, Zachary Taylor, Gordon and Dix.
   Divisions showing non-effective rate higher than average: Camps Funston, Pike, Travis, Zachary Taylor, Lee, Dodge, Lewis and Jackson.
4. Venereal Disease—
   Annual admission rate Regulars in United States 88.6
   Annual admission rate National Guard (Divisions in U. S.).. 46
   Annual admission rate National Army (Divisions in U. S.).. 66.9
   National Guard Divisions having rate above average: Camps Logan, Wadsworth, Wheeler, Doniphan, Hancock and Sevier.
   National Army Divisions having rate above average: Camps Dix, Travis, Lee, Dodge, Jackson.
5. Number of cases of Pneumonia 608
   Highest number in any one Division (31st) 102
   Number of cases of Meningitis 94
   Highest number in any one Division (81st) 37

6. NEW CASES OF SPECIAL DISEASES REPORTED DURING THE WEEK ENDING DEC 21, 1917

Divisions	Pneumonia	Dysentery	Malaria	Venereal	Paratyphoid	Typhoid	Measles	Meningitis	Scarlet fever	Deaths	Noneffective per 1,000 on day of report
27th, Wadsworth...	4	..	....	45	..	..	...	..	..	0	33.3
28th, Hancock.....	5	...	...	35	..	..	1	1	..	2	24.6
29th, McClellan.....	3	1	1	5	..	..	30	..	5	3	27.5
30th, Sevier.....	3	...	1	28	..	..	1	2	..	8	30.5
31st, Wheeler.....	102	1	2	31	..	..	5	1	..	13	67.4
32d, MacArthur...	4	...	...	21	..	..	17	..	5	4	48.1
33d, Logan.....	5	...	1	57	..	..	61	1	..	1	37.2
34th, Cody.....	60	...	...	16	..	..	107	..	3	16	52.1
35th, Doniphan.....	22	...	2	30	..	..	271	10	7	7	60.7
36th, Bowie...	53	...	...	20	..	..	9	2	1	34	77.0
37th, Sheridan.....	2	...	...	7	..	..	27	..	..	0	15.9
38th, Shelby...	17	...	3	18	..	..	41	..	..	7	50.7
39th, Beauregard...	8	...	5	12	..	..	8	4	..	14	73.6
40th, Kearny.....	35	...	...	...	..	..	240	..	7	11	75.6
76th, Devens.....	1	...	...	16	..	..	26	1	..	1	27.9
77th, Upton.....	10	...	...	57	..	..	8	..	2	0	20.8
78th, Dix.....	2	...	...	63	..	..	6	..	1	1	33.7
79th, Meade.....	16	...	...	27	..	..	33	2	2	2	21.2
80th, Lee.....	14	...	...	81	..	..	101	..	..	5	52.6
81st, Jackson.....	15	...	3	28	..	..	87	37	..	21	49.4
82d, Gordon.....	4	...	1	21	..	..	269	2	..	2	33.0
83d, Sherman.....	5	...	...	27	..	..	29	2	4	3	24.4
84th, Taylor.....	27	...	...	21	..	..	77	3	..	6	57.4
85th, Custer.....	3	...	...	16	..	..	68	1	..	2	23.6
86th, Grant.....	6	...	...	12	..	..	9	1	1	2	21.5
87th, Pike.....	6	...	...	22	..	..	514	8	76	30	68.6
88th, Dodge.....	9	...	...	33	..	..	48	2	..	4	50.4
89th, Funston.....	11	...	...	9	..	..	269	3	1	13	78.0
90th, Travis.....	80	...	...	100	..	..	220	4	..	21	66.0
91st, Lewis.....	7	...	1	35	..	..	...	5	3	4	50.2

7. ANNUAL RATE PER THOUSAND FOR SPECIAL DISEASES

	Regulars, U. S. Army, in U. S. only, 1915*	Regulars in U. S., Week Ending Dec. 21, 1917	National Guard, All Camps, Week Ending Dec. 21, 1917	National Army, All Camps, Week Ending Dec. 21, 1917	American Expeditionary Forces, Week Ending Dec. 20, 1917
Pneumonia	2.59	13.9	45.7	25.6	43.7
Dysentery	3.97	0.2	0.2	0.0	0.7
Malaria	12.52	1.0	2.1	0.6	0.3
Venereal	91.23	88.6	46.0	66.9	94.9
Paratyphoid	0.31	0.0	0.0	0.0	0.0
Typhoid	0.21	0.0	0.0	0.0	0.0
Measles	20.28	52.6	115.9	207.8	34.9
Meningitis	0.29	0.4	2.9	8.3	5.5
Scarlet fever	0.59	2.9	3.9	10.6	18.4

* Enlisted men only, both white and colored.

NEWS OF THE CANTONMENTS

Thirty-First Division, Camp Wheeler, Macon, Ga.

DEC. 22, 1917.

Measles has about disappeared at last. No cases have been reported for three days. Mumps are the fashion now, with from fifty to seventy new cases a day. Pneumonia has decreased greatly, but is still with us.

Major Zinsser, M. R. C., who has been making a special study of pneumonia, is leaving for another camp. He will make a special report on the disease as he saw it here.——Major Ralph Greene has gone to Washington on a short leave.——Colonel Duncan will go home to Fort McPherson for Christmas, returning next day.——Major Staley of the Veterinary Corps is inspecting the camp and remount depot.

The tuberculosis board has completed its work, and may be expected to leave soon. About 500 men were discharged for tuberculosis. The board on cardiac and nervous diseases discharged almost as many more; this, after all recruits had been examined by local boards, and again at Camp Gordon or elsewhere. The number of men weak either physically or mentally that were caught in the draft net is astonishing. Many connot read or write. The limit was reached in two who, it is said, on reaching the base hospital did not know that they had surnames. When asked his name, one said "Bill." The next question was, "Bill what?" and he replied, "Just Bill."

BASE HOSPITAL NOTES

The installation of plumbing and sewerage is progressing rapidly, though the contractor said it will take two months to complete the job.——The twenty nurses who came to our relief when the hospital was overcrowded have been ordered to Fort McPherson for duty.

Major Cole has been attending the meeting of the Southern Surgical Association at Jacksonville, Fla., during the week, but is expected to return today.

The surgical section has two lectures each Sunday afternoon, as a part of the preparation for overseas service.

ONE HUNDRED AND SIXTH SANITARY TRAIN

Major George F. Keenan, our popular and efficient train commander, has today departed on ten days' leave to visit relatives in Boston. Major Job C. Patterson assumes command of the train, and Capt. Robert F. Ashworth, commanding Ambulance Company No. 121, is acting director of ambulance companies during Major Keenan's absence.

Lieutenant Mallon, Field Hospital No. 123, who was taken ill with pneumonia while in Atlanta, is reported doing fairly well.

Eighty-Fifth Division, Camp Custer, Battle Creek, Mich.

DEC. 30, 1917.

The general health of the camp is above the average. Contagious diseases have fallen off markedly. The epidemic of measles seems to be well in hand. The report of the development of new cases shows relatively few in number. Fortunately, the outbreak of measles was particularly light and untoward sequelae were not encountered.

Prior to Christmas the Red Cross had furnished every man with a knitted helmet, sweater, scarf, wristlets and socks and a comfort kit. The expenditure for equipment of this sort has amounted to many thousands of dollars.

Although the weather is cold, the thermometer registering down around zero most of the time, work is being accomplished with the same spirit as formerly.

The commanding general has announced that the division first prepared will go to France first, and as a consequence the desire to be quickly prepared has resulted in a marked stimulation in the work. The number of hours of work has been increased by utilizing Saturday morning, the usual inspection morning, for hikes; 10 to 15 miles must be done. Sunday morning is set aside for the usual weekly inspection. Immediately after the holidays much more strenuous work will be done by every organization.

BASE HOSPITAL

Many of the medical officers have been away during the holidays visiting their homes. Every department of the hospital is now in excellent working order, and the men of this camp are receiving the best there is in scientific treatment.

There are relatively few venereal disease cases in the hospital and relatively few in camp. There may be an increase in venereal infection following the numerous leaves that have been granted. This remains to be seen. Our venereal report is much less than is usually expected.

THREE HUNDRED AND TENTH SANITARY TRAIN

The cold weather seems to have but little effect on the work in these organizations. Drills, hikes and general work as would be expected under actual combat conditions are carried out daily.

Two new officers have been assigned to Field Hospital No. 339—Lieuts. Clarence Lee and George Steeley. These officers were sent from Fort Riley.

NOTES

Major Vosburg, assistant to the division surgeon, is spending a few days' leave in New York.

Major Edward, sanitary inspector, spent his Christmas leave at his home in Pittsburgh.

Major E. C. Jackson, director of ambulance companies, visited friends in Grand Rapids, Mich., and went goose hunting. From the description the major gave on his return, it consisted mostly in hunting, as the geese had hidden themselves very completely. The only game spotted was one poor, half-starved rabbit. The major had buck-fever so badly that the rabbit escaped only the worse for his fright.

Lieut. J. R. Longley, commanding officer of Field Hospital No. 337, was the only officer in camp who received any season's greetings from the medical societies of which they are members. Lieutenant Longley received a substantial check together with one for his wife from the physicians of Fond du Lac, Wis.

It certainly would be an excellent proposition if the various medical societies of the country would keep in touch with their members and at least show some interest in men who have given up so much to do their "bit" for their country.

Major Lewis Wine Bremerman, director of field hospitals, spent December 21 in Flint, Mich., as the guest of the Genesse County Medical Society. He addressed the society on "What the Medical Man Owes His Country." This society is known as the singing society of Michigan, as all of their meetings are preceeded and closed by the singing of patriotic airs by the entire membership. Whether it is this fact or something else, there seems to be great interest shown by the membership, and they turn out in large numbers.

Eighty-Seventh Division, Camp Pike, Little Rock, Ark.

DEC. 27, 1917.

Christmas at Camp Pike did not dawn "cold and clear," according to the story books. It began to rain on Christmas eve, and was still raining in the morning when the medical officer turned over in his cot at the sound of reveille, and wondered what the children were doing back home about that time. A great deal had been done to make Christmas a pleasant day for the enlisted man in the Army. This scheme did not include the officers, who are in many instances many times more isolated, lonesome and homesick than are the men.

The division surgeon ruled that all but two of the commissioned personnel from each unit might go home for Christmas. This resulted in a large exodus of officers. Among those who took this holiday leave were Captains Carstophen of North Carolina and Slack of Mississippi, and Lieutenants Mason and Summerville of Alabama, Ingram of Tennessee, McLean of North Carolina, Thorpe of Illinois, Yeagle of Missouri and Whittle of Florida.

A convalescent camp has been opened in the Three Hundred and Twelfth Sanitary Train, with a personnel picked from all four field hospital companies. The object of the camp is to take care of the overflow from the base hospital, principally those recovering from measles. One hundred and twenty-seven patients were admitted the first day, with a possibility of over 400 within a few days. Within forty-eight hours of the opening of the camp, four cases of pneumonia had developed, and the patients had to be returned to the base hospital. Each patient is to be kept under observation ten days before being allowed to be returned to his original organization. It is the intention of the division surgeon at an early date to open a field hospital in the sanitary train that will take over the work of the convalescent camp. Field Hospital Company No. 345 is to have this work, which will give an opportunity to study a field hospital in actual operation.

The lyceum for medical officers was concluded last week with two lectures. The first was by Lieut.-Col. Kyle Rucker, judge-advocate general of the Eighty-Seventh Division. Colonel Rucker's lecture was very practical, and emphasized the necessity for medical officers to familiarize themselves with the basic points of military law and to discipline promptly for offenses under it. The last lecture in this course was by Col. N. W. Williams, commander of trains in the Eighty-Seventh Division, of which the Three Hundred and Twelfth Sanitary Train will form a part. Colonel Williams said that one reason he delivered the lecture was to give the officers of the train an opportunity to become acquainted with their future "boss." He urged the necessity of concerted action in the management of trains, and said that trains in general were one of the trouble makers in compaigns. One of the prime requisites in a good train commander, he said, was a "large vocabulary."

Lieut. W. S. Howard of Ambulance Company No. 346 recently received word from the Surgeon-General that he had passed successfully the examination for a commission in the Regular Army Medical Corps.

Lieut. T. R. Ayers of St. Louis, battalion surgeon in the Three Hundred and Thirty-Fifth Field Artillery, recently received his promotion to captain.

Capt. Nolan Stewart of Mississippi, commanding Ambulance Company No. 345, has been made acting director of the ambulance companies, Three Hundred and Twelfth Sanitary Train.

ORDERS TO OFFICERS OF THE MEDICAL CORPS

To Takoma Park, D. C., Walter Reed General Hospital, for duty, Lieut. EDGAR A. BOCOCK.

To Washington, D. C., for instruction in connection with the establishment of a hospital, Col. FRANK R. KEEFER.

To Camp McClellan, Anniston, Ala., for temporary duty, Major CONDON C. McCORNACK.

To Camp Kearny, Linda Vista, Calif., for duty, Lieut. ROBERT P. WILLIAMS.

To Pontiac, Mich., Watertown, N. Y., Washington, D. C., Chicago, Ill., to inspect the production and equipment of motor ambulances, and on completion *to his proper station,* Major JOHN P. FLETCHER.

To Philadelphia, Pa., Philadelphia General Hospital, for intensive training in his specialty, Lieut. WILLIAM L. STARNES

To Camp Cody, Deming, N. M., *Camp Kearny,* Linda Vista, Calif., to make special sanitary inspections, and on completion *to his proper station,* Col. WILLIAM F. LEWIS.

To Fort McPherson, Ga., for duty, for ten days, and on completion *to Camp Gordon,* Atlanta, Ga., for temporary duty in the base hospital for ten days, and on completion *to his proper station,* Lieut. JOSEPH M. GREER.

To Highland Park, Ill., to inspect properties offered as sites for hospitals, and on completion to his proper station, Major JOHN R. McKNIGHT.

To Excelsior Springs, Mo., to inspect properties offered as sites for hospitals, and on completion *to his proper station,* Major FRANK N. CHILTON.

To Milwaukee, Wis., for temporary duty, Lieut. THOMAS L. GORE.

To Wernersville, Pa., to inspect a sanatorium in regard to its adaptability for military purposes, and on completion *to Camp Dix,* Wrightstown, N. J., and *Camp Upton, L. I., N. Y.,* to make inspection, and on completion *to his proper station,* Col. FREDERICK P. REYNOLDS.

To Washington, D. C., for duty, Lieut. SHANNON L. VAN VALZAH.

To Camp Fremont, Palo Alto, Calif., for duty, Major GEORGE R. CALLENDER.

To Philadelphia, Pa., for instruction, and on completion *to his proper station,* Lieuts. FRED L. EYESTONE, MATHEW C. HUNTER, HENRY B. SMITH, WALTER C. TILDEN.

To Pittsburgh, Pa., for instruction, and on completion *to his proper station,* Capts. CHARLES B. GUTELIUS, GEORGE D. HAYWORTH, Lieuts. RICHARD T. ARNEST, JOSEPH R. BLOOMER, DON P. CLAYPOOL, HAROLD B. DISBROW, CHARLES R. EDWARDS, NORRIS W. GILLETTE, J. WARREN KNOPP, DUKE LEE, CHARLES S. LEHNER, LECKY H. RUSSELL.

To Chicago, Ill., for instruction, and on completion *to his proper station,* Lieuts. HENRY N. BLACKBURN, R. T. COOKSEY, AMOS V. COOPER, A. A. MITTEN, CHARLES PATTERSON, ORLANDO W. PICKARD.

To New Orleans, La., for instruction, and on completion *to his proper station,* Majors WILLIAM F. LORENZ, CLARENCE E. YOUNT, Capt. W. W. JOHNSTON, Lieuts. ROBERT H. BRYANT, DAVID ADIGER, WILLIAM G. LIEFERT, L. A. WOODLOCK.

To New York City, for instruction, and on completion *to his proper station,* Capt. CHARLES C. SMITH, Lieuts. HOWARD E. BOUCHER, CHARLES S. DRYER, CLAUDE D. GREEN, ALBRO L. PARSONS, JOHN S. CONROY, LEWIS P. JONES, ROBERT H. NOELL, HERMAN C. RUSSELL, FRANK STEINKE, GEORGE R. CLAYTON, CHARLES J. HUFNAGEL, CLARENCE C. NESBITT, WILLIAM E. TRUAX.

To report in person to the Surgeon-General of the Army for duty in his office, Major HENRY J. NICHOLS.

To Camp Sevier, Greenville, S. C., *Camp Beauregard,* Alexandria, La., *Camp Bowie,* Fort Worth, Tex., *Camp Pike,* Little Rock, Ark., *Camp Funston,* Fort Riley, Kan., *Camp Doniphan,* Fort Sill, Okla., to inspect, and on completion *to his proper station,* Col. DEANE C. HOWARD.

Leave of absence for five days, effective Dec. 16, 1917, Lieut. CLARENCE P. BAXTER.

To Chanute Field, Rautoul, Ill., *Excelsior Springs, Mo.,* and *Highland Park, Ill.,* to inspect properties offered as sites for hospitals, and on completion will comply with further instruction, Col. WESTON P. CHAMBERLAIN.

ORDERS TO OFFICERS OF THE MEDICAL RESERVE CORPS

Alabama

To Belleville, Ill., Signal Corps, Aviation School, Scott Field, for assignment to squadrons, from Fort Riley, Lieut. ALEXANDER W. GRAVES, Ashland.

To Camp Greene, Charlotte, N. C., for duty, from Fort Oglethorpe, Lieut. MODIE E. CUNNINGHAM, Birmingham.

To Camp Hancock, Augusta, Ga., base hospital, from Evans Dental Institute, Philadelphia, Capt. MACK ROGERS, Birmingham.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieuts. EDWARD D. McADORY, Cullman; ZADOC L. WEATHERFORD, Red Bay.

To Camp Wadsworth, Spartanburg, S. C., base hospital, from Fort Oglethorpe, Lieut. LEMUEL B. NICHOLSON, Gadsden.

To Fort Riley, for instruction, from Chicago, Capt. ROBERT D. BROWN, Mobile.

To New York City, for instruction, and on completion to his proper station, from Camp Gordon, Lieut. ARTICE B. CULBERSON, Birmingham.

Arizona

To Camp Sherman, Chillicothe, Ohio, base hospital, from New York City, Capt. CHARLES T. STURGEON, Globe.

To Fort Riley, for instruction, from Los Angeles, Lieut. FRANCIS F. MALONE, Phoenix.

To South San Antonio, Kelly Field, for duty, Capt. GRANT S. MONICAL, Phoenix.

Arkansas

To Camp Fremont, Palo Alto, Calif., for duty, from Fort Oglethorpe, Lieut. LOREN WALLIN, Pine Bluff.

To Camp Joseph E. Johnston, Jacksonville, Fla., for temporary duty, from Fort Oglethorpe, Lieut. JOHN E. BURNS, Black Rock.

To Camp Pike, Little Rock, Ark., base hospital, Lieut. ROBERT B. MOORE, Little Rock.

To New York City, for instruction, and on completion to his proper station, from Camp Gordon, Lieut. ARCH S. CHAPMAN, Mammouth Springs.

To San Antonio, Texas, Aviation Section, Signal Corps, Kelly Field, for duty, Lieut. ROBERT C. MEADERS, Marvell.

California

To Camp Belvoir, Belvoir, Va., for duty, from Fort Leavenworth, Capt. JAMES M. FISHER, Gilroy.

To Camp Lewis, American Lake, Wash., base hospital, from Los Angeles, Capt. WILLIAM H. ROBERTS, Pasadena; from Presidio, San Francisco, Lieut. CHARLES E. SCHOFF, Davis.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Dodge, Capt. HARRY X. CLINE, Burbank.

To Fort Oglethorpe, for instruction, from Philadelphia, Lieut. ROBERT P. STURR, San Francisco.

To Fort Riley, for instruction, from Los Angeles, Lieuts. WALLACE A. REED, Covina; KARL M. BONNOFF, RAY A. CARTER, JAMES P. GILLIS, JAMES L. MILLER, Jr., PAUL B. ROEN, Los Angeles; JOHN P. BYRNES, Oakland; BENJAMIN E. MERRILL, Santa Paula.

To Fort Sam Houston, Texas, for duty, from San Francisco, Capt. JAMES G. CUMMING, Berkeley.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Kearny, Lieut. JOHN H. FRANKLIN, Guadalupe.

To New York City, for duty, from Fort McDowell, Capt. MARK A. WILLIAMSON, Lone Pine; for duty in connection with the course

of military roentgenology at Cornell Medical College, from Los Angeles, Capt. WILLIAM B. BOWMANN, Los Angeles.

To Presidio of San Francisco, Calif., for orthopedic duty, from Presidio of San Francisco, Capt. MAYNARD C. HARDING, San Diego.

To San Antonio, Aviation Section, Signal Corps, Kelly Field, for duty, Lieut. FRANK A. LOWE, Blythe.

To San Francisco, Calif., for temporary duty, Lieut. FRANK J. DINGEMAN, San Diego.

Canal Zone

To United States and his home and honorably discharged, Lieut. FORREST M. EVANS, Balboa.

Colorado

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Dodge, Lieut. LAWRENCE C. COOK, Ouray.

To South San Antonio, Texas, for duty, Major FRANCIS H. McKAUGHT, Silver Plane.

To Washington, D. C., and on completion *to Camp Travis,* Fort Sam Houston, Texas, for examination of command for tuberculosis, Capt. ALEXIUS M. FORSTER, Colorado Springs.

Connecticut

To Boston, Mass., for instruction, and on completion to Fort Oglethorpe for instruction, Capt. ROBERT D. ROLLER, JR., Bridgeport.

To Camp Sevier, Greenville, S. C., base hospital, from Evans Dental Institute, Philadelphia, Lieut. WATERMAN LYON, New Britain.

To Fort Oglethorpe, for instruction, Lieut. JAMES F. MACNISH, New Haven.

To Lakewood, N. J., base hospital, from Camp Upton, Capt. JOHN A. MURPHY, New Haven.

Delaware

To New York City, for instruction, and on completion to his proper station, from Camp Lee, Lieut. JOSEPH M. BARSKY, Wilmington.

District of Columbia

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Capt. EDGAR D. THOMPSON, Washington.

To Camp Meade, Admiral, Md., for duty, from Camp McClellan, Capt. EDGAR D. THOMPSON, Washington; from Fort McPherson, Lieut. JOHN CHESTER BRADY, Washington.

To Lancaster, Pa., for temporary duty in connection with Aviation, and on completion to his proper station, from Washington, D. C., Major EDWARD G. SEIBERT, Washington.

To his home and honorably discharged on account of being physically disqualified for active service, Lieut. WILLIAM H. NORTON, Washington.

Florida

To Aberdeen, Md., for duty, from Fort Oglethorpe, Lieut. HENRY P. BEVIS, Arcadia.

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Dix, Lieut. HAROLD M. BEARDALL, Orlando.

To Camp Devens, Ayer, Mass., Base Hospital No. 38, from Boston, Lieut. LAURENT L. LAROCHE, Cocoa.

To Camp Gordon, Atlanta, Ga., Aviation Section, Signal Corps, for temporary duty, from Camp Gordon, Capt. ALBERT H. FREEMAN, Starke.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Capt. WILLIAM B. MOON, Lakeland.

To Camp Travis, Fort Sam Houston, Texas, base hospital, Lieut. THOMAS J. BUSSEY, Pensacola.

To Fort Oglethorpe, for instruction, Lieut. JOSEPH P. SCHELL, Chipley; from Philadelphia, Lieut. HARRY B. McEUEN, Quincy.

Georgia

To Camp Hancock, Augusta, Ga., base hospital, from Washington University, St. Louis, Capt. JAMES W. ROBERTS, JR., Atlanta.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieut. GORDON S. SUMNER, Poulan.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Pike, Lieut. BURTON P. BRADLEY, Folsom.

To New York City, for instruction, and on completion to his proper station, from Camp Sevier, Lieut. NORTHEN O. TRIBBLE, Atlanta; from Camp Gordon, Lieuts. EDWIN W. ALLEN, Milledgeville; LOWNDES W. SHAW, Savannah.

To Philadelphia, Pa., for instruction, and on completion to his proper station, from Camp Gordon, Lieut. JAMES F. PITMAN, Decatur.

Hawaii

To Fort Riley, for duty, from Camp Kearny, Major JOHN B. LUDY, Honolulu.

Illinois

To Belleville, Ill., Signal Corps, Aviation School, Scott Field, for assignment to squadrons, from Fort Oglethorpe, Lieut. JOHN W. DUNN, Dietrich.

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Devens, Lieuts. FRANK E. BROWNING, Chicago; from Camp Dix, HORATIO P. FREEMAN, Chicago; Harvard Medical School, for instruction, Lieut. GEORGE I. RIVARD, JR., Chicago.

To Camp Grant, Rockford, Ill., base hospital, Lieut. CHARLES E. WEST, Decatur.

To Camp Greene, Charlotte, N. C., for duty, from Fort Oglethorpe, Lieut. LUCIEN N. LINDSEY, Forsyth.

To Camp Lewis, American Lake, Wash., for duty, Lieut. WILLIAM H. STUTSMAN, Chicago.

To Camp Logan, Houston, Texas, for duty, Lieuts. MELBOURNE MABEE, Chicago; GROVER C. BILLINGTON, Nokomis.

To Camp MacArthur, Waco, Texas, for duty, from Camp MacArthur, Lieut. WILLIAM H. HOLMES, Chicago.

To Camp Sevier, Greenville, S. C., for duty, Capt. ARTHUR F. STOTTS, Galesburg; Lieut. ALFRED A. WILLANDER, Rockford.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Pike, Lieut. JOHN W. THORPE, Chicago.

To Cleveland, Ohio, for instruction, and on completion to his proper station, from Camp Custer, Lieut. EDGAR A. SMITH, Chicago.

To Fort Oglethorpe, for instruction, from Chicago, Major JOHN A. HORNSBY, Chicago; Lieuts. THOMAS D. CANTRELL, Bloomington; EDWARD W. WAHL, Sterling; LEO M. CZAJA, Chicago.

To Fort Riley, for instruction, Capt. OSCAR A. HANSON, Chicago; Capt. DANIEL W. YOUNG, Paris; Lieuts. ARTHUR E. ROGERS, Bloomington; HARRY C. KARIHER, Champaign; NORMAN COPELAND, MICHAEL V. GUTHRIE, EDWARD W. JOHANNES, CHARLES E. PETERS, CHESTER M. PETERS, HAROLD SWANBERG, Chicago; AUSBY L. LOWE, Robinson; from duty as a private, at Camp Dodge, Lieut. WYNN F. HAIG, Le Roy.

To New York City, for duty in connection with the course of military roentgenology at Cornell Medical College, from Chicago, Capt. EDWARD S. BLAINE, Chicago.

To Philadelphia, Pa., for duty, and on completion to his proper station, Major HARRY E. MOCK, Chicago; for duty as instructor, from Philadelphia, Lieut. MANDEL A. I. COHEN, Chicago.

To Rockefeller Institute, N. Y., for instruction, and on completion to Fort McHenry, Md., for temporary duty, from Fort McHenry, Lieut. ROBERT S. SALK, Chicago.

To San Antonio, Aviation Section, Signal Corps, Kelly Field, for duty, Lieut. CHARLES P. CHAFFIN, Chicago.

To Washington, D. C., for duty in the Surgeon-General's office, Major ALBERT J. OCHSNER, Chicago; for duty, from Camp Sherman, Major CASEY A. WOOD, Chicago.

To his home and honorably discharged on account of being physically disqualified for active service, Lieut. ELIOT C. DU MARS, Peoria.

Indiana

To Camp Fremont, Palo Alto, Calif., for duty, from Fort Oglethorpe, Major FRANK F. HUTCHINS, Indianapolis.

To Camp Funston, Fort Riley, Kan., base hospital, from St. Louis, Lieut. FRED G. EBERHARD, South Whitley.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieut. GROVER A. SMITH, Bryant.

To Cleveland, Ohio, for instruction, and on completion to his proper station, from Camp Sherman, Capt. RUFUS J. DANNER, West Terre Haute.

To Fort Clarke, Texas, Sanitary Train, Third Division, from Fort Oglethorpe, Lieut. RAYMOND A. BUTLER, Beech Grove.

To Fort McPherson, Ga., Hospital Unit "L," Capt. JAMES McC. STODDARD, Anderson.

To Fort Oglethorpe, Sanitary Train, Third Division, from Fort Oglethorpe, Lieut. RAYMOND A. BUTLER, Beach Grove.

To Fort Riley, for instruction, from Chicago, Lieuts. BYRLE R. KIRKLIN, Muncie; ROBERT W. REID, Union City.

To Hoboken, N. J., for duty, from Fort Benjamin Harrison, Lieut. SCOTT R. EDWARDS, Indianapolis.

To Pittsburg, Pa., for instruction, and on completion to his proper station, from Camp Sherman, Capt. MALCOLM B. FYFE, Wheatfield.

Iowa

To Aberdeen, Md., for duty, from Fort Oglethorpe, Lieut. Milton J. Freeman, Carroll.

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Upton, Lieut. LEO A. GOODMAN, Dubuque.

To Camp Greene, Charlotte, N. C., for duty, from Fort Oglethorpe, Lieut. GEORGE W. FRANK, Sunbury.

To Camp MacArthur, Waco, Texas, for duty, Capt. BEN S. WALKER, Corydon.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Dodge, Capt. FRANCIS J. SAVAGE, Des Moines.

To Fort Oglethorpe, Evacuation Hospital No. 7, from Fort Riley, Lieut. JOHN A. MATSON, Purdy.

To Fort Riley, for instruction, from Chicago, Lieuts. MILTON A. GIVEN, Des Moines; JUDD C. SHELLITO, Independence; for duty, from Fort Riley, Lieut. FREDERICK H. LAMB, Davenport; for instruction, from Kansas City, Lieut. JOHN R. CHRISTENSEN, Eagle Grove.

To his home and honorably discharged on account of being physically disqualified for active service, Capt. GEORGE M. JOHNSON, Marshalltown.

Kansas

To Aberdeen, Md., for duty, from Fort Oglethorpe, Lieut. FELIX COHEN, Kansas City.

To Camp Fremont, Palo Alto, Calif., for duty, from Fort Riley, Major JOHN W. TURNER, Fort Riley.

To Camp Pike, Little Rock, Ark., base hospital, from Washington University, St. Louis, Lieut. CLARENCE C. HARVEY, Emporia.

To Camp Taylor, Louisville, Ky., base hospital, from Kansas City, Lieuts. JAMES A. H. WEBB, Stafford; GEORGE I. THACHER, Waterville.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Pike, Capt. CHARLES H. LERRIGO, Topeka.

To Fort Riley, for instruction, Capt. ROBERT M. BENNETT, Mound Valley; from Chicago, Lieut. HARRY L. GOSS, Horton; from Kansas

City, Lieuts. FRANCIS J. MOFFATT, Clyde; LEWIS G. ALLEN, Lenexa; JAMES MILTON MOORE, Madison; ARTHUR K. OWEN, Topeka.

To New Orleans, La., for instruction, and on completion to his proper station from Camp Travis, Lieut. RICHARD C. YOUNG, Arkansas City.

To Philadelphia, Pa., for instruction, and on completion to his proper station, from Camp Lee, Lieut. JOHN H. COOPER, Topeka.

To San Antonio, Texas, Aviation Section, Signal Corps, Kelly Field, Lieut. CHARLES CHAPIN, McCune.

Kentucky

To Boston, Mass., Harvard Medical School, for instruction in orthopedic surgery, from Camp Meade, Lieut. MICHAEL P. LINK, Louisville.

To Camp Bowie, Fort Worth, Texas, base hospital, from Fort Oglethorpe, Lieut. ROBERT T. PIRTLE, Louisville.

To Camp Gordon, Atlanta, Ga., to examine the command for tuberculosis; from Camp Jackson, Capt. HORACE LUTEN, Fulton.

To Camp MacArthur, Waco, Texas, for duty, Lieut. WILLIAM A. CALLIS, Louisville.

To Camp Sevier, Greenville, S. C., for duty, Lieut. JAMES M. STAUGHTON, Covington.

To Camp Sherman, Chillicothe, Ohio, for duty, from Fort Oglethorpe, Lieut. JOHN D. GRANT, Maysville.

To Fort Oglethorpe, for instruction, from Camp Taylor, Major WALLER O. BULLOCK, Lexington; from Boston, Lieut. OTTO P. HODGE, Grants Luck.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Beauregard, Lieut. WILLIAM A. KRIEGER, Newport.

To New York City, for instruction, and on completion to his proper station, from Camp Lee, Lieut. LAWRENCE F. BOLAND, Stone.

To Philadelphia, Pa., for instruction, and on completion to his proper station, from Camp Wheeler, Lieut. SEPTIMUS T. TAYLOR, Central City.

To his home and honorably discharged, Lieut. WADE H. JEFFERSON, Cadiz.

Louisiana

To Camp Beauregard, Alexandria, La., for duty in base hospital, from Camp Sevier, Lieut. WILLIAM H. HAMLEY, Lake Providence.

To Camp Sheridan, Montgomery, Ala., to examine the command to eliminate the mentally unfit, from Camp Sheridan, Major ROY McL. VAN WART, New Orleans.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Dodge, Lieut. ROYAL C. DANLEY, Hamburg.

To New Orleans, Camp Beauregard, La., Camp Bowie, Fort Worth, Texas, *Camp Pike*, Little Rock, Ark., Major ISADORE DYER, New Orleans.

To New York City, for instruction, and on completion to his proper station, from Camp Sevier, Lieut. GUY A. BROOKS, New Orleans.

To San Antonio, Texas, Aviation Section, Signal Corps, Kelly Field, for duty, Lieuts. ENOCH S. FULTON, New Iberia; HOUSTON C. CHAMBERS, New Orleans; HARRY W. SCOFIELD, Shreveport.

Maryland

To Fort Barrancas, Fla., for duty, from Camp Wheeler, Lieut. RICHARD E. YELLOTT, Fallston.

Maine

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Sevier, Lieut. PHILIP P. THOMPSON, Portland.

To Fort Oglethorpe, for instruction, from Boston, Lieut. HERBERT W. HALL, Hallowell.

Massachusetts

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Devens, Capt. NATHANIEL POPE BREED, Lynn; Lieuts. HARRY J. TATE, Pittsfield; MELVIN H. WALKER, Westboro; for instruction in orthopedic surgery, Lieut. PATRICK H. O'CONNOR, New Bedford.

To Camp Wadsworth, Spartanburg, S. C., base hospital, Lieut. FRANK A. MILLETT, Greenfield.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Pike, Lieut. WALTER A. JILLSON, Westboro.

To Fort Oglethorpe, for instruction, Capts. JOSEPH SEGAL, Boston; FORREST F. PIKE, Melrose; Capt. JOHN H. LINDSAY, Fall River; Lieuts. ELPHEGE A. BEAUDET, ROY S. PERKINS, Lowell; CHARLES L. M. JUDKINS, Lynn; FRANK W. WHEATLEY, North Abington; BENJAMIN F. JANES, North Cambridge; JOHN W. LEDBURY, Uxbridge.

To Fort Riley, for duty as instructor, from Boston, Major ARIAL W. GEORGE, Boston.

To Pittsburgh, Pa., for instruction, and on completion to his proper station, from Camp Taylor, Capts. RALPH W. DENNEN, Waltham; WILLIAM E. DENNING, Worcester.

Michigan

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Devens, Capt. JULIUS H. POWERS, Iodia.

To Camp Sherman, Chillicothe, Ohio, for duty, from Fort Oglethorpe, Lieut. MARTIN W. CAVENEY, Highland Park.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Custer, Lieuts. CLAUD B. RAY, Detroit; FREDERICK J. BURT, Goodrich; HOWARD B. KINYON, Trenton; from Camp Dodge; Lieut. MAHLON R. SUTTON, Adrian.

To Cleveland, Ohio, for instruction, and on completion to his proper station, from Camp Custer, Lieuts. RALPH A. NORRIS, Detroit; HERBERT W. LANDON, Monroe; from Camp Sherman, Lieut. LEWIS N. TUPPER, Redford.

To Fort Oglethorpe, for instruction, Lieut. VERSILE M. GATES, Central Lake.

To Fort Riley, for instruction, from Chicago, Lieut. JOHN D. STEWART, Hartford.

To New York City, for instruction, and on completion to his proper station, from Camp Taylor, Capt. FLOYD A. ROBERTS, Flint; from Camp Sevier, Lieut. WILLARD F. VAUGHAN, Plainwell.

To Pittsburgh, Pa., for instruction, and on completion to his proper station, from Camp Sherman, Lieut. JOE DEPREE, Zeeland.

To South San Antonio, Kelly Field, for duty, Capt. MYRON S. GREGORY, Eureka.

Minnesota

To Camp Kearny, Linda Vista, Calif., base hospital, Capt. HUGH S. WILLSON, Minneapolis.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Dodge, Lieut. WILLIAM P. O'MALLEY, St. Paul; from Camp Grant, Lieut. HARRY M. LOWELL, Rochester.

To Fort Oglethorpe, for instruction, from Boston, Lieut. RICHMOND FAVOUR, JR., Red Lake.

To Fort Riley, for instruction, Lieut. PAUL S. EPPERSON, Crosby.

To Gerstner Field, Lake Charles, La., for duty, from New York City, Lieut. ALBERT D. CORNIEA, St. Paul.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Travis, Capt. WILLIAM H. HENGSTLER, Osakis.

To Park Field, Memphis, Tenn., for duty, from New York City, Lieut. ALBERT J. WENTWORTH, Mankato.

To South San Antonio, Texas, Kelly Field, for duty, Lieut. LEO L. ELLIOTT, Redlake.

Mississippi

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Dix, Lieut. CARLOS R. McKEE, Wesson.

Missouri

To Camp Devens, Ayer, Mass., base hospital, from Kansas City, Lieut. PAUL V. ANNADOWN, Kansas City.

To Camp Fremont, Palo Alto, Calif., for duty, from Fort Oglethorpe, Capt. OSCAR F. BAERENS, St. Louis.

To Camp MacArthur, Waco, Texas, for duty, Lieut. ADOLPH M. WOOD, Lentner.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieut. ABRAM E. PLATTER, Memphis.

To Chicago, Ill., for duty, and on completion to his proper station, from Washington, D. C., Major H. GABRIEL SEALIG, St. Louis.

To Fort Riley, base hospital, from Fort Riley, Lieut. WELCOME B. TILTON, Grant City; for instruction, Lieuts. CLARENCE P. HARRIS, Daisy Cape; URAL A. V. PRESNELL, Mennett; SCHUYLER C. HARBOUR, St. Louis; from Kansas City, Lieuts. REX L. DIVELY, FRANK McCLUNY POSTLETHWAITE, JOHN T. SWANSON, Kansas City; from Camp Grant, Lieut. E. STANTON STOFER, Kansas City.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Travis, Lieut. FRANK N. GORDON, St. Louis.

To New York City, for duty in connection with the course of military roentgenology at Cornell Medical College, from Kansas City, Capt. EDWARD H. SKINNER, Kansas City; for instruction, and on completion to Fort Oglethorpe, for duty with an evacuation hospital, from Camp Sevier, Capt. DOUGLAS HAGGARD, Navada; from Camp Gordon, Lieut. LOUIS J. BIRSNER, Ste. Genevieve.

To Waco, Texas, Aviation Field, for duty, Lieut. DAILEY APPLEBARRY, Iron Mountain.

Honorably discharged on account of being physically disqualified for active service, Lieut. ROBERT E. HOGAN, West Plains.

Nebraska

To Camp Greene, Charlotte, N. C., for duty, from Fort Oglethorpe, FRANK J. STODDEN, Omaha.

To Cleveland, Ohio, for instruction, and on completion to his proper station, from Camp Taylor, Lieut. LYNN T. HALL, Omaha.

To Fort Riley, for instruction, Lieut. WILLIAM EDMONDS, Nebraska City; from Chicago, Lieuts. OSCAR E. COLEMAN, Ainsworth; HANS C. PEDERSEN, Dannebrog; from Kansas City, Lieut. JOSEPH ANTONY, Omaha.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Beauregard, Lieuts. UEN S. HARRISON, Neligh; from Camp Travis, LEO D. HARMAN, Table Rock.

To Rockefeller Institute, N. Y., for instruction, and on completion *to Fort McHenry, Md.*, for temporary duty, from Fort Oglethorpe, Lieut. GROVER C. RICE, Bayard.

Nevada

To Camp MacArthur, Waco, Texas, for duty, Lieut. DAVID R. BEDINGER, East Ely.

New Hampshire

To Fort Oglethorpe, for instruction, from Boston, ERNEST W. LOWE, Fremont.

New Jersey

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Dix, Lieut. JACOB BLUMBERG, Jersey City; from Camp Upton, Lieuts. FRANK BORTONE, Jersey City; ORVILLE R. HAGEN, Paterson.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieuts. MARTIN W. CURRAN, Chatsworth; HENRY B. DORR, Ocean Grove.

To Camp Wheeler, Macon, Ga., for duty, from Camp Wheeler, PHILIP DuB. BUNTING, Elizabeth.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Pike, Capt. THOMAS S. McCABE, Newark.

To Fort Oglethorpe, for instruction, Lieut. HERMAN TRAEGER, Atlantic City; from Newport News, Va., Lieut. WILLIAM L. CORNWELL, Bridgeton; from Philadelphia, Lieuts. LESLIE H. EWING, Berlin; ALEXANDER C. MOON, Camden; CHARLES B. KAIGHN, Stratford.

To Langley Field, Hampton, Va., for duty, from New York City, Lieut. HUGH S. CHIDESTER, Hoboken.

To Neurological Institute, N. Y., for intensive training, from Camp Mills, Lieut. NICHOLSON W. PINTO, Hoboken.

To New York City, for instruction, and on completion to his proper station, from Camp Jackson, Lieut. FLOYD C. SHUGART, Orange.

To Philadelphia, Pa., for instruction in orthopedic surgery, Capt. FREDERICK W. MARCY, Camden; University of Pennsylvania, for instruction, from Evans Dental Institute, Lieut. THOMAS A. CLAY, Paterson.

To San Antonio, Aviation Section, Signal Corps, Kelly Field, for duty, Lieut. EDMUND EASTWOOD, High Bridge.

To Selfridge Field, Mount Clements, Mich., for duty, from New York City, Lieut. IRVING S. INGBER, Secaucus.

New Mexico

To South San Antonio, Texas, Kelly Field, for duty, Lieut. JESSE G. HOLMES, Alamegorodo.

New York

To Army Medical School, Washington, D. C., for duty, Lieut. WILLIAM J. CARROLL, Brooklyn.

To Aviation Camp, Houston, Texas, for duty, from New York City, Lieut. ALBERT VALENSI, New York City.

To Brooklyn, N. Y., for duty, Major HENRY M. MOSES, Brooklyn; from Camp Dix, Major CHARLES D. NAPIER, Brooklyn.

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Devens, Capt. WILMARTH S. BUCK, Plattsburg; Lieuts. CHARLES A. SMITH, New Rochelle; BENJAMIN F. COLEGROVE, Van Ettena; from Camp Meade, Lieut. HOMAN R. MARVIN, Lyon Mt.; from Camp Upton, Lieut. WILLIAM A. MORGAN, New York City; Harvard Medical School, for instruction, Lieut. RAYMOND B. MORRIS, Olean.

To Call Field, Wichita Falls, Texas, for duty, from New York City, Lieut. BARNETT ARONSON, Brooklyn.

To Camp Cody, Deming, N. M., base hospital, from Ann Arbor, Lieut. ABRAHAM M. RABINER, Albany.

To Camp Fremont, Palo Alto, Calif., for duty, from Fort Oglethorpe, Major FREDERICK W. LOUGHRAN, Lieut. PAUL E. McCHESNEY, New York City.

To Camp Gordon, Atlanta, Ga., to examine the command for tuberculosis from Camp Jackson, Lieut. EPHRAIM GOLDMAN, New York City.

To Camp Grant, Rockford, Ill., base hospital, Lieut. HENRY R. LESSER, New York City.

To Camp Greene, Charlotte, N. C., base hospital, from Camp Greene, Capt. DAYTON C. WIGGIN, Staten Island.

To Camp Jackson, Columbia, S. C., base hospital, from Evans Dental Institute, Philadelphia, Capt. HARRY B. HUVER, Williamsville; base hospital, Lieut. MAXWELL BOOXBAUM, New York City.

To Camp Kelly, San Antonio, Texas, for duty, from Fort Oglethorpe, Lieut. LAWRENCE D. CREMIN, Ossining.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieuts. ALFRED H. VOGT, Buffalo; JOHNSTON MacLEOD, Flushing; FRED VOSBURGH, Standish.

To Camp Sevier, Greenville, S. C., base hospital, from New York City, Lieut. ISAAC REITZFIELD, New York City.

To Camp Shelby, Hattiesburg, Miss., base hospital, from Concentration Camp, Lieut. ROBERT H. FOWLER, New York City.

To Camp Sherman, Chillicothe, Ohio, base hospital, from Camp Sherman, Capt. CLARKE S. GOULD, Walton.

To Canal Zone, for duty, from Fort Oglethorpe, Lieut. PERCIVAL D. BAILEY, Cleveland.

To Chandler Field, Essington, Pa., for duty, from New York City, Lieut. RUSSELL C. PARSON, Brooklyn.

To Chanute Field, Rantoul, Ill., for duty, from New York City, Lieut. LINN V. H. REED, New York City.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Grant, Capt. JAMES W. BEVERIDGE, New York City; Lieut. VICTOR G. BOURKE, Livingston Manor; from Camp Custer, Lieut. CARL V. TYNER, Newport.

To Cleveland, Ohio, for instruction, and on completion to his proper station, from Camp Custer, Capt. LEON M. KYSOR, Hornell.

To Fort McPherson, Ga., Hospital Unit H, Lieut. JOHN CUNNING BRADY, Buffalo.

To Fort Oglethorpe for instruction, Lieuts. BERNATH WEISS, Brooklyn; MILTON A. BROEMSER, JOSEPH BROOWITZ, JESSE D. HAND, HERMAN B. PHILIPS and HENRY K. SCHNEIDER, New York City.

To Love Field, Dallas, Texas, for duty, from New York City, Lieut. MAX MENSCH, Brooklyn.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Beauregard, Lieuts. ROBERT W. HELM, New York City; STANLEY S. INGALLS, Parish.

To New York City, Neurological Institute, for intensive training, from Camp Mills, Capts. GEORGE A. SHARP, Beacon; JOHN F. W. MEAGHER, Brooklyn; EDWIN G. ZABRISKIE, Lieuts. JOHN T. MacCURDY, WILLIAM M. SCRUGGS, New York City; Aviation Section, Signal Corps, for duty, Lieut. JOHN DUNNINGTON, New York City; for instruction, and on completion to his proper station, from Camp Meade, Lieut. CHARLES H. YOUNG, New York City.

To Pittsburgh, Pa., for instruction, and on completion to his proper station, from Camp Sherman, Capt. CLINTON E. GOODWIN, Weedsport.

To Rockefeller Institute for instruction in the serum therapy of pneumonia, from duty as a private at Camp Upton, Lieut. HOWELL K. BABCOCK, Brooklyn.

To Scott Field, Belleville, Ill., for duty, from New York City, Lieut. WARREN P. KORTRIGHT, New York City.

To Taliaferro Field, Fort Worth, Texas, for duty, from New York City, Lieut. ALBERT G. COOK, Brooklyn.

To Wilbur Wright Field, Fairfield, Ohio, for duty, from New York City, Lieut. SAMUEL TRIPLER, New York City.

To his home and honorably discharged from the Medical Reserve Corps, Lieut. GEORGE H. SHAW, Camillus; Lieut. ARTHUR P. POWELSON, Walden.

North Carolina

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Dix, Lieut. LEIGHTON W. HOVIS, Charlotte.

To Camp Greene, Charlotte, for duty, from Fort Oglethorpe, Lieut. THOMAS H. ROYSTER, Tarboro.

To Camp Kelly, San Antonio, Texas, for duty, from Fort Oglethorpe, Lieut. JOHN B. POWERS, Wake Forest; from Richmond, Lieut. ROBERT P. NOBLE, Raleigh.

To Fort Clarke, Texas, Sanitary Train, Third Division, from Fort Oglethorpe, Lieut. WILLIAM T. RUARK, Wilmington.

To Fort Oglethorpe, for instruction, Lieut. JAMES G. BRASWELL, Jr., Wilson; Sanitary Train, Third Division, from Fort Oglethorpe, Lieut. WILLIAM T. RUARK, Wilmington.

To New York City, for instruction, and on completion to his proper station, from Camp Sevier, Capt. RAYMOND POLLOCK, Newbern; from Camp Lee, Lieut. NEAL G. NICHOLSON, Powelton.

To Philadelphia, Pa., for instruction, and on completion to his proper station, from Camp Jackson, Lieut. ALFRED MORDECAI, Raleigh.

To Richmond, Va., base hospital, from Camp Meade, Lieut. JAMES M. COVINGTON, Jr., Wadesboro.

North Dakota

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieut. HOWARD L. SAYLOR, Cogswell.

To Fort Riley, for instruction, from Kansas City, Lieut. LESLIE G. EASTMAN, Hazen.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Travis, Capt. THOMAS J. STRONG, Williston.

Ohio

To Army Medical School, Washington, D. C., for duty, from Camp Sevier, Capt. ELMER A. KLEIN, Norwood.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieut. NEVILLE E. STEWART, Ashtabula.

To Camp Sevier, Greenville, S. C., for duty, Lieuts. GEORGE E. FLINN, Coolville; ROBERT W. SCHILLING, Toronto.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Grant, Lieut. FREDERICK S. COOPER, Lakewood.

To Cincinnati, Ohio, Aviation Section, Signal Corps, for duty as medical member of examining board and recruiting officer, Lieut. EDWARD KING, Cincinnati.

To Cleveland, Ohio, for instruction, and on completion to his proper station, from Camp Sherman, Lieut. HAROLD WILSON, Conneaut.

To Fort Oglethorpe, for instruction, Lieuts. GEORGE T. MEHAN, Cincinnati; CHALLIS R. DAWSON, Portsmouth; CHARLES SCOFIELD, Rock Creek.

To New York City, for instruction, and on completion to his proper station, from Camp Dix, Capt. WILLIAM A. QUINN, Portsmouth; from Camp Taylor, Lieuts. EDWIN F. WAKEFIELD, Chagrin Falls; CHARLES H. BAILEY, East Liverpool.

To his home and the inactive list, Capt. ORR A. DICKSON, Jefferson.

Oklahoma

To Fort Riley, for instruction, from Evacuation Hospital No. 7, Lieut. SIMS D. BEVILL, Poteau; from Fort Riley, Lieut. CHARLES C. GARDNER, Ashland; from Kansas City, Lieut. DANIEL E. LITTLE, Eufaula.

Oregon

To Camp Lewis, American Lake, Washington, base hospital, Lieut. CHARLES R. McCELL, Portland.

To Fort Riley, for instruction, from Los Angeles, Lieut. CLYDE O. WAINSCOTT, Hermiston.

To his home and honorably discharged on account of being physically disqualified for active service, Lieut. RALPH L. SHARKEY, Portland.

Pennsylvania

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Dix, Lieuts. ASBURY C. STROUP, Philadelphia; ABNER H. BAUSCHER, Temple; from Camp Meade, Lieuts. JESSE C. STILLEY, Erie; JOHN G. STRIEGEL, Pottsville; from Camp

Upton, Lieuts. RALPH E. BUCKLEY, Hazelton; WILLIAM F. MORRISON, FRANK McC. RAMSEY, Philadelphia; AUGUST G. HINRICHS, Pittston; Harvard Medical School, for instruction, Lieut. WILLIAM O. MARKELL, Pittsburgh.

To Camp Devens, Ayer, Mass., base hospital, from Evans Dental Institute, Philadelphia, Lieut. HARRY S. CARMANY, Philadelphia.

To Camp Jackson, Columbia, S. C., base hospital, Lieut. GEORGE P. PILLING, Jr., Philadelphia.

To Camp Lee, Petersburg, Va., base hospital, from Philadelphia, Lieut. SCOTT D. GLEETON, Erie.

To Camp MacArthur, Waco, Texas, for duty, Capt. JOSEPH J. CLARKE, Pittsburgh.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieuts. WILLIAM WEISS, Philadelphia; JAMES G. G. STRICKLAND, Shamokin.

To Camp Sherman, Chillicothe, Ohio, for duty, from Fort Oglethorpe, Lieut. EDWARD J. MELEY, Turtle Creek.

To Camp Taylor, Louisville, Ky., for duty, Capt. PATRICK J. McDONNELL, Archibald.

To Canal Zone, for duty, from Fort Oglethorpe, Lieut. VAN C. DECKER, Nicholson.

To Chickamauga Park, Ga., Eleventh Infantry, from Fort Oglethorpe, Lieut. EDWARD J. MELEY, Turtle Creek.

To Fort McPherson, Ga., Hospital Unit L, from Jenkins Arcade, Pittsburgh, Lieut. JOHN L. NURKHOLDER, Mount Pleasant.

To Fort Oglethorpe, for duty as instructor, from Philadelphia, Major WILLIS F. MANGES, Philadelphia; base hospital, from Fort Oglethorpe, Lieut. ALFRED COWAN, Philadelphia; for instruction, Lieuts. DAVID A. BOGGS, SAMUEL S. PEARCE, Pittsburgh; from Philadelphia, Lieuts. GEORGE E. ALLEMAN, Altoona; FRANCIS H. McCASKEY, Freedom; GEORGE A. BROWN, RAYMOND F. W. CAMPBELL, LEON S. COHEN, AGNEW F. FRANKHAUSER, BOOKAR E. RHUDY, HAROLD E. WESCOTT, Philadelphia; OSCAR E. SALTER, Shamokin.

To Fort Riley, to select medical officers for service with the Food Division of the Surgeon-General's Office, and on completion to his proper station, Capt. CASPER W. MILLER, Wallingford.

To Leon Springs, Texas, for orthopedic duty, from Oklahoma City, Capt. CARSON COOVER, Harrisburg.

To New York City, for duty, from Camp Pike, Capt. PERCY DeLONG, Philadelphia; for instruction, and on completion to his proper station, from Camp Taylor, Capt. CHARLES R. PALMER, West Chester; from Camp Gordon, Lieut. CARL K. WAGENER, Swissvale; from Camp Jackson, Lieut. JOSEPH McFATE, Meadville; from Camp Meade, Lieut. HENRY A. CARSKADDEN, Mont Alto; Neurological Institute for intensive training in brain surgery, from Camp Gordon, Lieut. STEPHEN S. LANDIS, Pittsburgh.

To Philadelphia, Pa., as medical member of the examining board and recruiting officer, from Camp Jackson, Capt. BURTON K. CHANCE, Philadelphia; for duty, Lieut. SETH A. BRUMM, Philadelphia; from Fort Oglethorpe, Lieut. MARSHALL W. SINCLAIR, Philadelphia; for instruction, and on completion to his proper station, from Camp Gordon, Lieut. RUSSELL H. KING, Pittsburgh; from Camp Lee, Lieut. WILLIAM C. HENSYL, Berwick; University of Pennsylvania for duty, from Chickamauga Park, Lieut. GEORGE K. STRODE, West Chester.

To Rockefeller Institute, N. Y., for instruction, and on completion to Camp Grant, Rockford, Ill., base hospital, from Fort Oglethorpe, Lieut. CAMILLE J. STAMM, Philadelphia; to Fort Oglethorpe, for instruction, Lieut. RANDALL ZIMMERMAN, Wilmerding; to his proper station, from Camp Hancock, Lieut., FRANK P. STROME, Scranton; for instruction in the serum therapy of pneumonia, and on completion to his proper station, from Camp Wheeler, Lieut. VINCENT J. FENERTY, Philadelphia.

Rhode Island

To Boston, Mass., for duty, Capt. JOHN L. FISHER, Providence.

To Fort Oglethorpe, for instruction, from Boston, Lieut. MALFORD W. THEWLIS, Wakefield.

To Fort Riley, for instruction, Lieut. GEORGE WATT, East Providence.

South Carolina

To Boston, Mass., for instruction, and on completion to Fort Oglethorpe, for instruction, Capt. WILLIAM H. JOHNSON, Charleston.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Grant, Lieut. WILLIAM A. WHITLOCK, Kitchings Mills.

To Neurological Institute, N. Y., for intensive training in brain surgery, from Camp Wheeler, Capt. SAMUEL C. BAKER, Sumter.

To Philadelphia, Pa., for instruction, and on completion to his proper station, from Camp Jackson, Lieuts. JAMES A. NORTON, Conway; BAYLIS F. SLOAN, Walhalla.

Tennessee

To Boston, Mass., for instruction, and on completion to his proper station, from Camp Dix, Lieut. JOSEPH R. SHELTON, Oliver Springs.

To Camp Fremont, Palo Alto, Calif., for duty, from Fort Oglethorpe, Lieut. WILLIAM A. CASHION, Puryear.

To Camp McClellan, Anniston, Ala., for duty, from Fort Oglethorpe, Lieut. ERNEST V. EDWARDS, Knoxville.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Pike, Capt. JOHN B. STEELE, Chattanooga; Lieut. THOMAS H. INGRAM, Memphis.

To Fort Oglethorpe, for instruction, Capt. THOMAS A. P. R. JONES, Knoxville.

To Fort Riley, for instruction, from Chicago, Lieut. LEON M. LANIER, Nashville.

To New York City, for instruction, and on completion to his proper station, from Camp Johnson, Lieut. JUSTIN E. LACY, Jasper; from Camp Lee, Lieut. MARCUS G. SPINGARN, Memphis; from Camp Meade, Lieut. LLEWELLYN H. DYKES, Johnson City.

To Philadelphia, Pa., for instruction, and on completion to his proper station, from Camp Sevier, Lieuts. GEORGE E. WILSON, Cardiff; HERBERT ACUFF, Knoxville; KYLE C. COPENHAVER, Mascot.

Texas

To Camp Greene, Charlotte, N. C., for duty, from Fort Oglethorpe, Lieut. VINNEY L. SMITH, Jewett.

To Fort Oglethorpe, for instruction, Lieut. THOMAS P. McLENDON, Worthan; from Kansas City, Lieut. MELVIN O. REA, Galveston.

To Fort Riley, for instruction, from Chicago, Lieut. GUSTAVE E. HENSCHEN, Georgetown; from Kansas City, Lieuts. WILLIAM H. CADE, Jr., Galveston; RUPERT K. McHENRY, Georgetown.

To New Orleans, La., for instruction, and on completion to his proper station, from Camp Travis, Lieuts. HARRY A. LOGSDON, YOUNG J. MULKEY, Fort Worth.

To New York City, for duty, from Washington, D. C., Capt. CLAUDE C. CODY, Jr., Houston; from Camp Travis, Lieut. FREDERICK R. LUMMIS, Houston.

To Philadelphia, Pa., for instruction, and on completion to his proper station, from Camp Meade, Lieut. NORMAN A. BUSSEY, Port Arthur.

To South San Antonio, Texas, Kelly Field, for duty, Lieut. CHARLES B. GANT, Graham; MARVIN L. TURNEY, San Antonio.

Vermont

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Grant, Capt. HERBERT B. HANSON, East Berkshire.

To Cleveland, Ohio, for instruction, and on completion to his proper station, from Camp Taylor, Capt. CHARLES E. LIBBEY, Danville.

To Fort Oglethorpe, for instruction, from Boston, Lieuts. CHESTER L. SMART, Burlington; FRANK C. ANGELL, Randolph.

Virginia

To Camp Gordon, Atlanta, Ga., base hospital, from Fort Oglethorpe, Lieut. LUCIUS G. GAGE, University.

To Camp Meade, Admiral, Md., base hospital, Lieut. ROBERT S. PRESTON, Richmond.

To Camp Travis, Fort Sam Houston, Texas, base hospital, Lieut. RAY C. BLANKENSHIP, Marion.

To Neurological Institute, N. Y., for intensive training, from Camp Mills, Frank H. Redwood, Richmond.

To Philadelphia, Pa., for instruction in orthopedic surgery, Lieut. WILLIAM L. POWELL, Roanoke.

To Richmond, Va., base hospital, from Camp Lee, Capt. THOMAS C. FIREBAUGH,, Harrisonburg; from Camp Meade, Lieut. ROBERT A. DAVIS, Newport News.

Washington

To Camp Kearny, Linda Vista, Calif., base hospital, Capt. COPELAND PLUMMER, Seattle.

To Camp Lewis, American Lake, Wash., for duty, Capt. EDWARD R. PERRY, Raymond.

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Lewis, Lieut. CHARLES E. EATEN, Seattle.

To Fort Riley, for instruction, Lieuts. HAROLD B. THOMPSON, Seattle; ALEXANDER W. SEIBERT, Wenatchee; from Los Angeles, Lieuts. WILLIAM H. BOONE, North Yakima; ROY C. BAUMGARTEN, Seattle; BURTON E. PAUL, Tacoma; WALTER A. BURG, Uniontown.

To Fort Worden, Washington, for duty, Lieut. EMORY LEROY KNISKORN, Centralia.

To Seattle, Wash., Aviation Section, Signal Corps, for duty, Capt. RICHARD W. PERRY, Seattle.

To his home and honorably discharged, on account of being physically disqualified for active service, Capt. CHARLES T. DULIN, North Yakima.

West Virginia

To Chicago, Ill., for instruction, and on completion to his proper station, from Camp Pike, Lieut. EMERSON MEGRAIL, Wheeling.

To Fort Oglethorpe, for instruction, from Walter Reed General Hospital, Capt. ALBERT L. GRUBB, Berkeley Spring; for instruction, Lieut. LEROY J. BUTLER, Hansford.

Wisconsin

To Belleville, Ill., Signal Corps, Aviation School, Scott Field, for assignment to squadrons, from Fort Oglethorpe, Lieut. JAMES G. CONLEY, Racine.

To Camp Gordon, Atlanta, Ga., to examine the command for tuberculosis, from Camp Jackson, Capts. HARRY C. MIX, Green Bay; MICHAEL R. WILKINSON, Oconomowoc.

To Camp Joseph E. Johnston, Jacksonville, Fla., to examine the command for tuberculosis, from Camp Jackson, Lieut. LEON H. FLANCHER, Milwaukee.

To Fort Riley, for instruction, Lieut. ARTHUR F. STUECK, Michicot; from Chicago, Lieut. MAXMILIAN W. MOELLER, Milwaukee.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST; SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ILLINOIS

Cross of War for Evanston Physician.—The French government has awarded to Dr. Jane Wells Craven, formerly of Evanston, the *Croix de Guerre* for rescuing and aiding wounded under fire.

Drake Summoned to Washington.—Dr. C. St. Clair Drake, state director of health of Illinois, Springfield, has been summoned to Washington to confer with the chiefs of the Medical Section of the Council of National Defense regarding the prevention of disease among Army camps.

Poliomyelitis.—As announced by the director of the state department of health, there were in Illinois, from Jan. 1 to Dec. 10, 1917, 825 cases of poliomyelitis, 550 of which were in Chicago. There were in the state 225 deaths from this disease, 149 of which occurred in Chicago. By the date mentioned, with the advent of cold weather, the disease incidence had diminished to a sporadic case here and there. To combat the after-effects of this disease in the shape of paralysis and deformity, infantile paralysis clinics have been established under the direction of Dr. Clarence W. East of the department, located in Chicago, Chicago Heights, Oak Park, Ottawa, Rock Island, Moline and Springfield. Clinics are held at these places every two weeks, except at Springfield, where weekly clinics are held.

Chicago

Asks Appropriation Against Smallpox.—Health Commissioner John D. Robertson, December 21, asked the finance committee of the city council for an appropriation of $50,000 to employ a vaccinating staff. Several cases of smallpox have recently been discovered and he considers the condition one of emergency.

Reexamination of Rejected Men.—The War Department has been given the use of the quarters at Cook County and Presbyterian hospitals for the reexamination of selected registrants found deficient and granted exemption. Lieut.-Col. Chandler P. Robbins, M. C., Fort Riley, Kan., has been instructed to proceed to Chicago and organize the staff of this hospital.

Memorial Venereal Disease Clinic.—At the annual meeting of the Iroquois Memorial Association, December 29, Dr. Hugo E. Betz, chief surgeon of the institution, gave a résumé of the work of the year in which he stated that the hospital had handled 17,000 cases during the last twelve months, 12,000 of which were emergency cases. Resolutions were adopted approving the establishment of a free clinic for venereal diseases to be open every evening. Five physicians have volunteered to take charge of this clinic, and the work begins this week.

INDIANA

Society Will Pay Dues.—The Indianapolis Medical Society has undertaken to pay all dues, local and state, for its members who have gone to the service.

Smallpox.—The situation in Richmond is said to be improving daily. The number of cases is decreasing.——There are said to be fifty cases of smallpox in Bicknell. The city board of health is reported to have refused to quarantine the patients on the ground that the city has no money with which to accomplish this.

Personal.—Dr. Morse Harrod of Fort Wayne has been seriously ill with smallpox.——Dr. Oscar E. McWilliams, Anderson, has been appointed surgeon to the Union Traction Company, succeeding Dr. John B. Fattic, resigned to enter Army service.——Dr. Maurice R. Lohman has been appointed deputy health commissioner of Fort Wayne, and will be placed in charge of all work in connection with the prevention of contagious diseases.

Hospital News.—A reorganization of the nurses' staff of Hope Hospital, South Bend, has been made, Dr. Charles S. Woods, superintendent of the Methodist Hospital at Indianapolis, furnishing the entire quota from the Methodist Episcopal Hospital. Dr. Earl E. Johnson, West Lebanon, will be the new superintendent of Hope Hospital.——A new county tuberculosis hospital will soon be started in Madison County, as the county council has purchased 52 acres of ground for that purpose.——Lutheran Hospital, Fort Wayne, is building a new $10,000 addition to its nurses' home.

MARYLAND

Diphtheria in College.—An epidemic of diphtheria in Mount Saint Mary's College, Emmittsburg, has caused the college to be closed and the students to be sent home. Each student has been thoroughly examined, and is believed to be free from the disease.

Personal.—Dr. George H. Hocking has been elected chairman of the newly organized Govans Branch of the Red Cross.——Lieut. Alexander J. Gillis, M. R. C., Baltimore, who has been on duty with the British government in France, was recently gassed while on a visit to the first line trenches.——Dr. J. Walter Layman, Hagerstown, who has been seriously ill in a hospital, is reported to be convalescent.——Dr. Alexander R. Mitchell, Monkton, has been appointed health officer of the seventh district of Baltimore County, succeeding Dr. N. Milner Bortner, resigned to enter the United States service.

Hospitals May Bar City Patients.—After the first of the year the city will have nowhere to send its indigent sick unless new arrangements are made with the hospitals which are now taking care of free patients. The city's contract with these hospitals is that they, as a whole, will take care of 350 patients a day. Often they handle more. For doing so, the hospitals receive 62½ cents a day for each patient, or a total of $79,843.75 a year. The average per capita cost of taking care of these patients is $1.99 per day, or $254,222.50 for the year. The hospitals, as a whole, that handle the city's cases are bearing an annual expense of $174,378.75 or more than should be borne by the city. The hospitals which receive city patients are Mercy, Maryland General, University of Maryland, St. Joseph's, St. Agnes,' Hahnemann General and Franklin Square. Each of these institutions has a contract with the supervisors of city charities which will expire December 31. Figures from the office of the supervisors of city charities show that last year there were 5,700 patients cared for under the contract, which cost the city $70,000. This did not include tuberculosis patients. The supervisors expect to take the matter up with the Board of Estimates of Baltimore before the present contracts expire.

MICHIGAN

Addition to County Hospital.—An addition is to be erected to the Kent County Hospital for the use of patients suffering from tuberculosis.

Conference on Contagious Diseases.—At a special meeting of the Kent County Medical Society, the druggists of Grand Rapids, and representatives of the state board of health, the topic of discussion was contagious and infectious diseases.

Smallpox.—A large number of smallpox cases of mild type were reported in Detroit. At present there are ninety cases under quarantine.——There are said to be thirty cases of smallpox in Reed City.——Twenty cases of smallpox have been reported in the vicinity of Ferryburg.

New Officers.—At the annual meeting of the Highland Park Physicians Club, December 6, the following officers were elected: president, Dr. Robert F. Foster; vice president, Dr. George A. Tolman, Detroit; secretary, Dr. Albert F. Stone, Bay City; treasurer, Dr. William N. Braley, Highland Park.

Inches Home from Abroad.—More than two hundred of the medical profession of Detroit attended a reception at the Hotel Tuller, December 8, in honor of Capt. James W. Inches, health officer of the city, who recently returned from a six weeks' tour of observation of the French, British and Italian war fronts on behalf of the American Red Cross.

Suppressing Venereal Diseases in Michigan.—Michigan has had in operation for the past two months a plan for the suppression of venereal diseases, having at first especial reference to the conditions arising in connection with the mobilization of troops in the Army cantonments. This plan was evolved from recommendations of a commission appointed by Governor Sleeper consisting of Drs. Richard M. Olin, secretary of the state board of health; Guy L. Kiefer, Detroit; Christopher G. Parnall, Jackson; Walter H. Sawyer, Hillsdale, and Alfred S. Warthin, Ann Arbor. The recommendations were printed in THE JOURNAL, Oct. 6, 1917, p. 1181. The plan is being carried out in cooperation with the state board of health under instructions from the governor. Cooperation has been arranged between the state board and the medical

officers of Camp Custer, the former reporting to the camp officers all communicable diseases reported each week and the latter reporting to the state board all discharges, with destination of men discharged because of physical disability, and all cases of venereal diseases, with source of infection when obtainable. The plan also provides for securing the cooperation of the physicians and pharmacists of the states with reference to venereal diseases, and in carrying out this part of it a letter was prepared and sent to the physicians of the state outlining the objects of the plan and calling their attention to the fact that they must report all cases of gonorrhea and syphilis coming to their attention, together with the source of infection, and informing them that the state board of health would apprehend the persons transmitting the disease and place them in hospitals for treatment at state expense. A blank form for reporting cases and carriers was prepared and sent with the letter, and these reports are to be held as confidential. Meetings were held in various places with physicians and pharmacists. At Saginaw the physicians and pharmacists separately passed resolutions endorsing the plan of the commission and the state board, and agreed to assist to the best of their ability in carrying it out. A meeting of organizations of pharmacists connected with the State Pharmaceutical Association, representing about 90 per cent. of its members, likewise endorsed the movement and requested the secretary of the state organization to send to every druggist in the state an appeal to cooperate by discontinuing the sale of venereal disease remedies except on prescriptions of physicians, to whom all infected persons should be referred. To December 19, more than a thousand reports had been received from physicians in response to the letter sent out, and out of the cases secured for investigation more than fifty carriers had been placed in hospitals for treatment. Through the courtesy of citizens at Battle Creek, a small hospital has been equipped there for the treatment of these patients. The City Board of Health of Detroit has placed at the disposal of the state board one pavillion of fifty beds in the Herman Kiefer Hospital, and the regents of the state university at Ann Arbor have offered fifty beds in the hospital there. Hospitals in other cities have offered facilities for the treatment of these patients. It will be seen that the original plan to confine the work to the Army cantonments has been expanded on the advice of Governor Sleeper to include the whole state, and Dr. W. F. English, a member of the state board, has been appointed to assist the state secretary in carrying out the work. Through an active campaign along the lines laid down it is hoped greatly to diminish the incidence of the venereal diseases in the state.

NEW YORK

Nutrition Clinic.—This clinic, which is conducted by the Vanderbilt Clinic, and is one of the 130 organizations reporting to the Babies' Welfare Association, states that it has enrolled 137 babies since its organization six months ago. The most recent development in connection with this nutrition clinic is the establishment of classes for the instruction of mothers in the preparation of milk formulas.

Herter Lectures.—The faculty of the University and Bellevue Hospital Medical College announces that a series of five lectures in the Herter Foundation will be delivered, January 7 to 11, inclusive, at the Carnegie Laboratory, at 4 o'clock, by Major Edward K. Dunham, M. R. C., U. S. Army, emeritus professor of pathology in the University and Bellevue Hospital Medical College, on "Principles Underlying the Treatment of Infected Wounds."

Deaths from Pneumonia Increase.—The figures compiled by the Bureau of Public Health Education of the department of health show that for the week ending December 22, there were 1,501 deaths reported in the greater city. Of these, 314 were due to pneumonia. During the previous week there were 263 deaths from pneumonia, giving an increase of fifty-one deaths for the week. In recent years, the average number of deaths per week at this time of the year has been about 200. The increase is attributed to the shortage of coal and the changeable weather.

Hospitals Suffering from High Cost.—Practically every hospital in the city is having a hard struggle with the problem of meeting current expenses occasioned by the ever-increasing cost of food, fuel and medicine. The budgets of all the hospitals show large deficits, and funds are coming in more slowly than usual, as much money usually given to the hospitals has been diverted to relief work in connection with the war. The Hospital for the Relief of Ruptured and Crippled shows a deficit of $37,319 above current revenue for the past year. It has sent out letters asking for financial support in its work.

New Officers.—Kings County Medical Society, Brooklyn, ninety-seventh annual meeting, December 18: president, Dr. Frederick C. Halden; vice president, Dr. John A. Lee, and secretary, Dr. Charles E. Scofield.——Richmond County Medical Society at Staten Island Academy, December 13: president, Dr. John D. Lucey, Stapleton; vice president, Dr. Daniel P. MacGuire, New Brighton; secretary, Dr. John S. Ware, Stapleton (reelected), and treasurer, Dr. Edward D. Wisely, Pt. Richmond (reelected).——Rensselaer County Medical Society at Troy, December 11: president, Dr. Thurman A. Hull; vice president, Dr. John H. Reid; secretary, Dr. George R. Stalter; treasurer, Dr. Russell F. Benson.

New Food Conservation Movement.—Recently a new movement was organized to conserve food, homes, health and woman power during war conditions and after. It to be known as the American Cooked Food Service. The officers elected were: president, Miss Jessie H. Bancroft; vice president, Mr. Adolph Lewisohn; secretary, Mrs. William G. Shailer; treasurer, Dr. Belle J. Macdonald. Other directors are Mrs. Edgerton L. Winthrop, Jr., Mrs. Herbert L. Satterlee and Mrs. Ransom S. Hooker. Mrs. Alice McKay Kelly, now organizing Red Cross canteens in Italy, is to be field secretary, and Mrs. Emma Waldron Davis, executive. The consulting board includes Mr. Herbert L. Satterlee, Dr. Graham Lusk, Dr. Henry Dwight Chapin, Dr. S. Josephine Baker, Dr. Charles A. E. Winslow, Dr. S. Adolphus Knopf, Mr. Cyrus C. Miller, Dr. Thomas D. Wood, Mr. George L. Bennett, Mr. Frederick S. Crum, Dr. G. Reese Satterlee, Prof. Irving Fisher, Mrs. John E. Milholland and Mrs. Bertha L. Grimes. The first station will be opened in a few weeks at 213 West Seventy-Ninth Street, with a motor service extending over a 2-mile radius. The food will be carried in insulated containers that keep it hot for several hours. The movement is designed to save the independent consumer by means of centralized service from commercial exploitation for his food supplies, and to keep together homes that otherwise might disintegrate because of the draft of women, domestic workers and house mothers into industrial or other war service.

NORTH CAROLINA

New Officers.—Buncombe County Medical Society, at Asheville, December 17: president, Dr. Joseph B. Greene; vice president, Dr. Charles Dewitt Colby, and secretary-treasurer, Dr. Charles H. Cocke (reelected), all of Asheville.

Cornerstone Laid.—The cornerstone of the Presbyterian Hospital, Charlotte, was laid with impressive ceremonies, December 5. The new hospital will have accommodation for 100 patients, will be three stories and basement in height, and the third floor is to be devoted entirely to private wards and operating rooms.

Woman as Acting Assistant Surgeon.—Surg. Benjamin W. Brown, U. S. P. H. S., in charge of the sanitary conditions in the five-mile zone surrounding Camp Green, Charlotte, has recommended that Dr. Anne L. Alexander, Charlotte, be appointed acting assistant surgeon to take charge of the medical work in the Charlotte public schools, working in cooperation with Surgeon Brown and Dr. C. Curtis Hudson, city health officer.

CANADA

Military Cross Awarded.—The Military Cross has been awarded to: Capts. Thomas Herbert, John Philip Selby Cathcart, Pt. Lamberton; Franklin Fletcher Dunham, Winnipeg, Manit.; Emmet Andrew McCusker, Arthur Allan Parker, Toronto, Ont.; Walter Henry Scott, J. Charles Sutherland and James Walter Woodley, Vancouver, B. C., all of the Canadian Army Medical Corps, and Capt. Douglas S. Creighton, Winnipeg, Manit., of the Royal Army Medical Corps.

Hospital News.—The main building of the Camp Military Hospital, Halifax, N. S., is now completed, and suffered little damage in the recent devastation overtaking that city. It is beautifully situated, and contains eight large wards, with accommodation altogether for 750 patients. A vocational building and two additional wings are under construction. ——During the past hospital year the Toronto Home for Incurables treated 324 patients. Seventy-four deaths occurred in that institution, of which twenty were from cancer. There was an overdraft of $9,182.——The Kitchener-Waterloo Hospital treated in the past twelve official hospital months 1,059

patients; 996 were discharged, and fifty-nine deaths occurred. There were ninety-one births in the hospital during the year.——A municipal hospital is to be established in western Saskatchewan.——The government of British Columbia has made a grant of $10,000 to the Kootenay Lake General Hospital.

Personal.—Capt. Roy Coots, C. A. M. C., has returned to Toronto on sick leave.——Capt. G. Lockhart Gall, R. A. M. C., Montreal, is home on sick leave.——Dr. Thomas W. Walker, Saskatoon, Sask., is now attached to the Duchess of Connaught's Canadian Red Cross Hospital at Taplow.——A cable from Lieut-Col. Graham Chambers to Toronto on Christmas day announces his return to good health and that he is now engaged as chief in medicine at Moore Barracks, Folkstone. ——Lieut.-Col. George W. Badgerow, London, England, formerly of Toronto, has been appointed consulting surgeon to the South African Eye and Ear Hospital, Richmond, England.——Capt. Fraser B. Hurd, Montreal, who has been surgeon specialist to the Twenty-Second Casualty Clearing Station, R. A. M. C., for the past two years, has been transferred to the Adler Hey Hospital, Liverpool, England.——Dr. Thomas B. Futcher, Johns Hopkins Hospital, Baltimore, has been gazetted lieutenant-colonel, and is now in charge of the medical services at the Ontario Military Hospital, Orpington, England.——Capt. Jean M. E. Prevost, C. A. M. C., Montreal, has been appointed medical officer of the Second Depot Battalion of the Second Quebec Regiment. Captain Prevost has seen service in France and has been twice wounded. He first went overseas with the Fifteenth Battalion, Toronto Highlanders.

GENERAL

Correction.—The formula for Asiatic pills appearing in the article by Barker and Sprunt, THE JOURNAL, December 8, page 1922, should read for a total of 100 pills instead of twelve pills.

North Pacific Surgeons Meet.—At the annual meeting of the North Pacific Surgical Association, held in Victoria, B. C., December 15, the following officers were elected: president, Dr. Milton G. Sturgis, Seattle; vice presidents, Drs. Ernest F. Tucker, Portland, Ore., and George S. Gordon, Vancouver, B. C.; secretary-treasurer, Robert D. Forks; councilor, Alfred Raymond, Seattle, and financial trustee, Dr. Casper W. Sharples, Seattle.

Iowa and Illinois Physicians to Meet.—The regular winter meeting of the Iowa and Illinois Central District Medical Association will be held at Davenport, Iowa, January 10. The program includes a film clinic, a paper on "Functional Conditions Contracted from Life in Trenches," by Dr. Sollier, and an illustrated address by Dr. Clarence W. Hopkins, chief surgeon of the Chicago and Northwestern System, on "Unusual Fractures."

Tuberculosis in the War.—The annual meeting of the National Jewish Hospital for Consumptives, Denver, to be held January 13, at the Savoy Hotel, will be followed by a conference at which "Tuberculosis and the War" will be the topic of discussion. Addresses will be made by Miss Jane Addams, Chicago; Dr. Hermann M. Biggs, state health commissioner of New York; Dr. Hatfield, secretary of the National Association for the Prevention of Tuberculosis, and others.

American Red Cross Opens Tuberculosis Hospital in France.—The first tuberculosis hospital in France created wholly by the American Red Cross, independent of French or American medical collaboration, was opened in Paris on Christmas Day. This hospital has been named the Edward L. Trudeau Tuberculosis Sanatorium. There are at present only eight beds, but it is hoped to increase the number to 1,200 within the next year. Dr. James L. Gamble, Baltimore, is in charge with a staff of Red Cross nurses.

Deaths Abroad.—Dr. Felicisimo Lopez, Consul General of Ecuador at New York for several years, charge d'affaires in Washington, and minister of finance of Ecuador; aged 70; a graduate of the University of Quito, Ecuador, in 1874; for the last five years a resident of Brooklyn, died at his home, December 15.——**Dr. Elizabeth Garrett Anderson,** Aldeburgh, Suffolk, England; University of Paris, 1870; L. S. A., London, 1865; aged 81; mayor of Aldeburgh, and the first woman to be elected mayor of an English city; member of the first school board for London; from 1866 to 1890 senior physician to the New Hospital for Women, London; lecturer on medicine in the London School of Medicine for Women, from 1876 to 1898, and dean of the institution from 1883 to 1903; president of the East Anglian Branch of the British Medical Association in 1896; visiting physician to the East London Children's Hospital; died at her home, December 18.

Veronal and Novocain to Be Manufactured in the United States.—The Federal Trade Commission has granted to three American firms licenses to manufacture and sell the preparations heretofore known as veronal and novocain, hitherto controlled by enemy aliens under American patents. The Abbott Laboratories, Chicago, have been licensed to produce and sell veronal under a nonexclusive license. Under the terms of the license issued, this drug is hereafter to be known as barbital, and it is stipulated that the new name, together with the scientific name, C. C. diethylbarbituric acid, be printed on all packages containing the drug. The name veronal may also be used on the package to aid in distinguishing the drug. The Abbott Company must pay to the alien property custodian 5 per cent. of its gross receipts on the sale of the drug. The Federal Trade Commission reserves the right to fix the price and to judge the quality of the drug as manufactured. The Rector Chemical Company of New York and the Farbwerke-Hoechst Company have been licensed to manufacture and sell novocain, hereafter to be called procaine. Here also the alien property custodian is to receive 5 per cent. of the gross receipts.

Bequests and Donations.—The following bequests and donations have recently been announced:

Children's Homeopathic Hospital, Philadelphia, $5,000, by the will of George C. Cross.

Babies' Hospital, Philadelphia, a ten-day drive, ended December 22, netted $187,132, or $12,132 above the amount first called for.

Shelby County (Ky.) Hospital, a donation of $10,000 by Col. D. R. Smith, Bloomington.

Columbus Hospital, New York, $10,000 to equip an operating room to be known as the Ramon Guiteras Operating Room; New York Academy of Medicine, $5,000 for any purpose desired; New York Post-Graduate Hospital, $5,000, to be used for the Guiteras Clinic; $10,000 to a young man in whom Dr. Guiteras was much interested, on condition that he take the name of Ramon C. Guiteras, one half of the bequest to be used to complete his education in medicine and one half for his establishment in practice; and the residuary estate to the town of Bristol, L. I., for the erection of a public schoolbuilding in memory of Mrs. Elizabeth Wardell Guiteras, the mother of the testator, by the will of Ramon Guiteras.

St. John's Hospital, Brooklyn, $20,000; Huntington (L. I.) Hospital, $25,000; Staten Island Hospital, New Brighton, $40,000; Nassau Hospital, Mineola, L. I., $10,000; St. Luke's Hospital, San Francisco, $20,000; and St. Luke's Hospital, New York, residuary legatee under the will of William H. White, Cold Spring Harbor, L. I.

Once More a Warning.—A letter has just been received from a physician in Colorado Springs, Colo., who acknowledges that he has been worked by one of the subscription swindlers recently mentioned in THE JOURNAL (December 15, page 2056; December 22, page 2134). The swindler represented himself as a solicitor for various publications in a contest for a scholarship in an educational institution. This time the organization behind the solicitor was stated to be the Advance Society of the University of Illinois. The doctor paid $24.55 in advance (that's where the name of the society comes in, we presume) in return for which he was to receive an annual subscription to the *Scientific American*, the *Literary Digest, Leslie's Weekly, Surgery, Gynecology and Obstetrics*, and in addition O. Henry's works in ten volumes and "The Great War" in five volumes. The solicitor, in order to give himself time "to make his get-away," informs the victim that should he not receive receipt for his subscription within fifteen days, he should address the main office of the society, and as there is no such office, the letter is returned by the postal department.

Death of Professor Remington.—Joseph Price Remington, distinguished as a pharmacist and chairman of the last two committees for the revision of the United States Pharmacopeia died at his home in Philadelphia, January 1, aged 70, after a long illness. He received the degree of Ph.G. in 1866, and later the degree of Ph.M. from the Philadelphia College of Pharmacy. He also had conferred on him the honorary degree of Pharm.D. by Northwestern University, Chicago, in 1899. He was F.C.S., F.L.S. and F.R.M.S. (Lond.). He had been professor of pharmacy in his alma mater since 1874, and dean since 1893; director of the pharmaceutic laboratory from 1877 to 1915; a member of the revision committee of the United State Pharmacopoeia since 1880, and chairman since 1901. He was the president of the First International Pharmaceutical Congress in 1893; chairman of a section in the Seventh International Congress of Applied Chemistry in London in 1909, and in New York in 1912; a fellow, member and honorary member of many foreign and American pharma-

ceutic and medical bodies. He was the author of Remington's "Practice of Pharmacy," which appeared in 1866; the editor of the "United States Dispensatory" since 1883, through nineteen revisions of Lippincott's Medical Dictionary since 1897, and of the United States Pharmacopeia of 1890, 1906 and 1913.

Conference of Council on Medical Education.—The fourteenth annual conference of the Council on Medical Education will be held at the Congress Hotel, Chicago, Monday, Feb. 4, 1918. The morning program will be devoted to medical education, and is as follows:

Opening of the conference, Dr. Horace D. Arnold, chairman, Council on Medical Education, Boston.

"Recent Progress in Medical Education," Dr. Nathan P. Colwell, Secretary, Council on Medical Education, Chicago.

"Problems of Administering Entrance Requirements," Prof. George Gailey Chambers, Director of Admissions, University of Pennsylvania, Philadelphia.

"The Student's Clinical Course in Medicine," Dr. George Dock, Professor of Medicine, Washington University Medical School, St. Louis.

"Some Problems in Medical Education Resulting from the War," Major Horace D. Arnold, M. R. C., U. S. Army, Boston.

In the afternoon the session will be held jointly with the Federation of State Medical Boards of the United States, and will deal with the general topic of medical licensure, as follows:

"A Central Cooperative Bureau of Information," Dr. David A. Strickler, President, Federation of State Medical Boards of the United States, Denver.

"The Civil Administrative Code of Illinois, and Medical Licensure," Francis W. Shepardson, Director, Illinois Department of Registration and Education, Springfield.

"The General Problem of the Minor Forms of Healing," Hon. Howell Wright, State Senator of Ohio, Cleveland.

"Sectarianism in the Science of Healing as Treated in Legislative Acts and Judicial Decisions," Harry Eugene Kelly, formerly attorney for the Colorado State Board of Medical Examiners, Chicago.

Tuesday, February 5, separate meetings will be held by the Federation of State Medical Boards of the United States and the Association of American Medical Colleges.

PARIS LETTER

PARIS, Nov. 29, 1917.

The War

SURGERY OF NERVES

In a previous letter, Chevrier's work in nerve surgery was discussed. He has reported further on his work, especially the progress of healing after nerve suture. It passes through several phases: 1. The electric reactions aggravate at first, then ameliorate, and then little by little the muscular tonus reappears. This phase has a minimum duration of four months. 2. The voluntary contractions appear. At first the muscles, although contracting, are not strong enough to cause motion; as development progresses, voluntary motion succeeds voluntary contraction. The muscles regain motive power in the order of return of function to their nerve supply from above downward, and in inverse order of the length of these nerves from the nerve trunk to the muscle. This cycle is observed only in cases of total suture. It is irregular in cases of partial suture or of liberation. Function may even return quickly. On the other hand, in a case of total suture, function may return very slowly. Chevrier has not observed any rapid cures, or rather, he has observed "false rapid cures," which, paradoxical at first, have been shown, on more careful examination, to be deceptive. The slowness of the recovery depends not only on the slowness of the nerve regeneration, but also on the state of the muscle, a fact that does not receive sufficient attention from clinicians. The nerve plaques in the muscle must be capable of functioning for the muscle fibers to contract. Here, postoperative electrical treatment, mechanotherapy and orthopedic surgery are of value and must be continued the longer, the greater the distance between the lesion and the terminal branches of the nerve; and with short muscles which lose their contractile power rapidly and regain it slowly. So, too, one may hasten nerve regeneration by means of radiotherapy in small and weak doses, and, perhaps, by stimulating injections.

Failures in nerve surgery are of two kinds: the real and the apparent failures. The first is the result of improper technic, usually an insufficient resection. The second, and most frequent, is the result of not choosing the operation that was indicated by the existing lesion, performing a simple liberation when a resection with suture was indicated. Certain total failures cannot be charged to the operator but to the nature of the lesion or its location—a very extensive lesion, a lesion of or near a plexus, the brachial, for instance, where the principles of a good suture are not applicable. A large number of apparent failures are slow cures, to which sufficient attention is not given. These failures will become successes in time if the patient is kept under observation long enough.

FRAGMENT OF BULLET ON DESCENDING AORTA EXTRACTED THROUGH POSTERIOR MEDIASTINUM

Professor Laurent of Brussels recently reported to the Académie de médecine the case of a soldier, aged 20, who six months previously had sustained a bullet wound of the chest. An abscess had formed. The fragment was lying on the descending aorta, the pulsations of the latter being transmitted to it. Laurent made a skin incision, 25 cm. long, and disarticulated and resected 12 cm. of the tenth and eleventh ribs, exposing to view the tenth intercostal nerve. The left lung and the diaphragm were pushed back. At a depth of 12 cm. there was imparted to the palpating finger a whirling sensation caused by the movement of the lung and diaphragm and the pulsations of the aorta. The foreign body, consisting of the covering of a bullet, was extracted without accident.

RENEWAL OF DENTAL PROSTHESES

M. Justin Godart, undersecretary of state for the military medical department, has issued an order by which all aids to mastication (plates, bridges, etc.) furnished to soldiers of all classes to relieve them of digestive disturbances, or which they will use during their enlistment in the army or auxiliary service, will be so furnished only during the period of enlistment. But, soldiers who have sustained injuries of the jaws or teeth while in service shall be considered as *"mutilés de guerre"* (war mutilated) and will have the right to renew their prosthesis during their lifetime.

THE ASSIGNMENT OF MEDICAL OFFICERS AT THE FRONT

Deputy Dejeante asked the minister of war whether steps had been taken (1) to assign medical officers according to their age, sending to the front those between 20 and 32, to the rear those between 32 and 42, and assigning through the interior those more than 42 years of age; (2) to relieve medical officers of the class of 1891 after twenty-seven months of service at the front, and (3) to consider the treatment of tuberculosis as a specialty of the same importance as otology, laryngology, etc. The following reply was received: 1. The commander-in-chief assigns medical officers to the army and the various medical formations at the front and in the rear, taking into account the age and aptitude of these officers. An age limit cannot, however, be fixed, the commander being the only judge of the needs of the service. 2. The relief of medical officers of the class of 1891 cannot be considered until after the officers of the class of 1890, now in service, have been relieved. 3. The treatment of tuberculosis is considered a specialty. The medical officers of sanatoriums are chosen, as far as possible, from among those who by study, work or previous activities have already specialized in the treatment of tuberculosis.

DONATIONS BY THE NORWEGIAN RESIDENTS OF FRANCE

A group of Norwegians, residing in Paris and the provinces, have constituted themselves a committee to collect funds from their compatriots for the relief of the wounded. About 270,000 francs ($54,000) have been collected and turned over to the Union of Foreigners in France. Of this sum, 145,000 francs ($29,000) have been divided among the various institutions for the reeducation of the mutilated, the Grand Palais, the quai Debilly, the Maison-Blanche and Juvisy, and 125,000 francs ($25,000) have been distributed, with the assistance of the Norwegian consuls, among similar institutions at Calais, Hâvre, Rouen, Nantes and Bordeaux.

Skimmed Milk and Food Economy

As stated in a previous letter (THE JOURNAL, April 15, 1916, p. 1212), the sale of skimmed milk has been authorized in order to offset, to some extent, the increasing insufficiency of the milk supply. Some of the suburbs of Paris have undertaken the sale, at a low price, by municipal organizations. The results attained have been very satisfactory. As much as 2,000 liters are being sold daily. The amount to be sold is limited by the quantity disposed of by the butter makers. By means of placards, notices to buyers and personal letters to mothers, the municipalities have taken all the necessary precautions to avoid the use of skimmed milk for infants and the sick. The price per liter being only 15 centimes (3 cents), it is a very cheap food but also a good food, since it is rich in proteins and carbohydrates. Of course, it is necessary that the skimmed milk be pasteurized and boiled.

Our Health Resorts and Baths

A medical committee, known as the Netherlands Medical Committee, has been formed in Holland. The permanent officers are M. Kesler, F. J. Roes, H. Visser, P. J. Eldering and A. Mertens. It is the function of this committee to disseminate among the physicians of Holland information regarding the French health resorts. Its activities will consist of: (1) publishing in Dutch an annual containing complete and detailed information of the spas, health resorts and seaside watering places of France; (2) publishing a map "La France thermale," with therapeutic indications; (3) making careful studies of the mineral analyses of the waters, their therapeutic properties and indications, of the French resorts. This work will be published in the scientific and literary review, *La France,* of which a Holland edition will be published in January, 1918; (4) organization of an exposition "La France, thermal and picturesque;" (5) lectures by members of the committee, or, later, by eminent French medical men; (6) organization of study tours to France by the medical men of the Netherlands.

Death of Dr. A. J. Magnin

Dr. A. J. Magnin, an American physician resident in Paris and attached to the American Hospital, is dead. At the beginning of the war, he devoted himself to the creation of an American ambulance, housed in the Pasteur Lyceum at Neuilly. Shortly afterward, he opened another ambulance at the College of Juilly, also maintained by Americans. During the Battle of the Marne, he left Bourget with his French colleagues and sought out and transported the wounded to Paris, utilizing for that purpose automobiles lent to him by his compatriots. At that time the arrangements for transportation of the wounded left much to be desired.

LONDON LETTER

LONDON, Dec. 4, 1917.

The War

THE TREATMENT OF TETANUS

In a previous letter to THE JOURNAL an analysis of the cases of tetanus treated in the home military hospitals by Sir David Bruce was given. He drew the conclusion that under early and thorough treatment with antitoxin the mortality might be reduced from the 50 per cent. at which it then stood to about 20. A further analysis now published shows that this hope has been realized. The following table shows the continual diminution of the mortality:

Analysis	No. of Cases	Recovered	Died	Mortality, Per Cent.
1914-1915	231	98	133	57.7
1915-1916	195	99	96	49.2
August, 1916	200	127	73	36.5
October-December, 1916	100	69	31	31.0
December, 1916-March, 1917.	100	81	19	19.0

Sir David Bruce refrains from expressing an opinion as to whether the great improvement is due to the specific treatment or to one of the several other factors involved. Referring to surgical treatment, he points out that if this could be made entirely successful, by the cleansing and sterilization of wounds at the outset, there would be no more cases of tetanus; but while there is some evidence of an improvement in surgical technic, much remains to be done.

The Lengthening Incubation Period.—Among the last hundred cases in which the symptoms of tetanus appeared within ten days of the time the wound was received, the mortality was 40 per cent.; when they appeared between the eleventh and the twenty-fourth day, it was 25 per cent.; in the remaining sixty-six cases, with an incubation period greater than twenty-five days, the mortality was 13.6 per cent. The longest incubation was 365 days, and the shortest, three days. Since the beginning of the war, the average incubation period has been steadily lengthening. This is probably mainly due to the prophylactic injection of antitoxin. In the first year of the war, 47 per cent. of cases had a short incubation period; in the last analysis this had fallen to 10 per cent. Correspondingly the percentage of cases with a long incubation period has risen from 6.4 to 69.

General and Local Tetanus.—In the present analysis, eighty-one cases were general and nineteen local. Among the former there were fifty-eight recoveries and twenty-three deaths, giving a mortality of 28.3 per cent. All the patients with local tetanus recovered. There is no evidence to support the view that a fractured bone complicating the wound is a source of danger heightening the death rate from tetanus.

Prophylactic and Therapeutic Inoculation.—In six of the cases, tetanus followed an operation, and one was fatal. In none of these was a prophylactic inoculation of antitetanic serum given before the operation, although the advice of the Tetanus Committee of the War Office is that this should always be done. As in each preceding series of cases, the mortality among patients who had received no prophylactic injection in France was considerably greater than among those so protected. The present policy advocated by the Tetanus Committee is that four prophylactic injections should be given to every wounded soldier at intervals of seven days; but in periods of hard fighting this might sound like a counsel of perfection.

A NAVAL MEDICAL OFFICER'S BRAVERY

The king has conferred the decoration of the Albert Medal on Surgeon Probationer Robert Sydney Steele Smith. He was medical officer of a war ship that was torpedoed by a submarine. When the torpedo struck the ship, Surgeon Smith was in the wardroom aft with the first lieutenant. The explosion wrecked the wardroom and rendered the first lieutenant unconscious. As all other exit was blocked, Surgeon Smith piled the wrecked furniture under the skylight, and got the first lieutenant through this on deck. He then attended to a petty officer who was lying on deck with a broken arm and leg, adjusted and blew up his life belt, and after doing the same for the first lieutenant, got him overboard, as the ship was then foundering. The first lieutenant was by now partially conscious, but was again stunned by an explosion when the vessel foundered, and when he was picked up by the boat he was apparently dead. Surgeon Smith applied artificial respiration until the first lieutenant showed signs of life; he afterward attended to the injured in the boat so far as the circumstances allowed, until they were picked up forty-three hours later.

HEALTH PROBLEMS AND RECONSTRUCTION

Dr. Christopher Addison, minister of reconstruction, who was formerly lecturer on anatomy at St. Bartholomew's Hospital, delivered an important address on health problems and reconstruction at a meeting under the auspices of the Faculty of Insurance. He said that health was a complex matter; food, and habits of life and hours of work, and many other factors were concerned. Unhappily, there was no body of men whose business it was to consider all these matters—now under the control of many different departments—and to formulate a policy and advise the government. At the Ministry of Munitions there was set up a Health of Munition Workers Committee, who had studied all those various aspects of the question as they affected munition workers. One of the many results of a precise investigation was that a relation had been discovered between hours of labor and working efficiency. In the case of women engaged in turning aluminum fuse boxes, whose hourly output at sixty-six hours a week had been taken as 100, it was found that the output rose to 134 when the hours were brought down to 54.8 and to 158 when the hours were again reduced to 45.6. In the case of boys on light work, 100 again being taken as the hourly output for a seventy-two hour week, the figure became 117 for a fifty-four hour week, and 129 for a fifty-three hour week. Among men engaged on heavy work, with 100 as the standard for a fifty-eight hour week, the output rose to 139 for a fifty-one hour week. Up to the present it had been no one's business in particular to find out such things so far as they related to the general community, and in after-war conditions, when it would be vital to increase the productive powers of the nation, there must be some body whose work it would be to collect all information bearing on the health of the people, and to discover where the gaps were and how they might be filled. The new central health authority, when it was set up, would obviously be concerned in the first place with matters relating to disease, its origin and treatment, but this could not be handled by an authority unless it had powers to deal with matters affecting sanitation. The proper housing of the people was one of the most important elements in a health system. Then there had to be considered all the functions—great and growing ones—which attached to insurance committees as affecting health, and also these of that other great branch of the health service, the poor law administration. This matter would not wait. With the end of the war an unprecedented burden would be thrown on health authorities, in respect not only to demobilized soldiers, but also to civilians, in the reaction after war tension. The machinery ought to be ready and competent to deal with the problem; otherwise the whole subject would be lost in the babel of counsels. Three great branches of work in particular ought to be arranged before the emergency arose, namely, the whole question of nursing and midwifery provision, and—a most thorny

one—the whole question of the relation of state health administration to the medical profession. He knew that the British Medical Association strongly took the view that it was the first necessity to create a central organization which would think out and consider the subject in advance. He confidently appealed that minor differences might be sunk and that the question might be regarded as a whole from the point of view of the national interest.

VOLUNTARY FOOD RATIONS FOR CHILDREN

The food controller, when issuing the new voluntary rations (given in a previous letter), laid stress on the fact that children were not included. He has now removed this exception. He recognizes that the needs of individual children differ greatly, and that some children may require more and others less. He strongly advises that boys and girls whose food is rationed should be weighed every fourteen days at the same period of the day before a meal, and a record kept of their weight without clothes. If the weights are stationary or decline after two consecutive weighings, the allowance of food should be increased. He recommends the following voluntary rations:

Ages Boys and Girls	Bread Pounds	Bread Ounces	Other Cereals Ounces	Meat Pounds	Meat Ounces	Butter, Margarin, Etc., Ounces	Sugar Ounces
0- 5	3	0	6	1	0	6	8
6- 8	3	8	8	1	8	8	8
9-12	4	8	10	2	0	10	8
Boys— 13-18	6	0	12	2	0	10	8
Girls— 13-18	5	0	10	2	0	10	8

The food controller has also issued the following suggestions with regard to the quantities of other foods which should on the average be supplied weekly to boys and girls whose consumption of bread, cereals, meat and sugar is rationed in accordance with the table:

Ages Boys and Girls—	Potatoes Lb.	Other Vegetables Lb.	Other Vegetables Oz.	Milk Pts.	Cheese Oz.	Eggs or Equivalent Only	Fish Oz.	Jam and Syrup Oz.	Cocoa Equivalent Oz.
0- 5	3	0	8	2	0	2	0	12	0
6- 8	4	1	0	2	1	2	0	12	1
9-12	5	1	0	2	1	2	8	12	1
Boys— 13-18	7	2	0	2	2	3	12	12	1
Girls— 13-18	5	1	0	2	1	2	12	12	1

Marriages

CAPT. CLINTON LUMAN HOY, M. R. C., U. S. Army, Three Forks, Mont., commanding Field Hospital Company No. 21, M. O. T. C., Fort Riley, Kan., to Miss Maude Wilkins of Lewistown, Mont., in Chicago, November 28.

LIEUT. JOHN ELDER HUTCHINSON, M. R. C., U. S. Army, Xenia, Ohio, on duty at Camp Zachary Taylor, Ky., to Miss Anna Kindcaid of Hartford, Conn., at Camp Zachary Taylor, December 8.

CAPT. PAUL MARTIN, M. R. C., U. S. Army, Indianapolis, on duty with the Lilly Base Hospital, Fort Benjamin Harrison, Ind., to Mrs. Grace Ellsworth Dewitt of Indianapolis, December 3.

LIEUT. CARL FOSTER SNAPP, M. R. C., U. S. Army, Chicago, now on duty at Fort McPherson, Ga., to Miss Alice Noyes Stafford of Chicago, at Grand Rapids, Mich., December 12.

P. A. SURG. PHIL BOLLER, U. S. N. R. F., Los Angeles, on duty with U. S. Navy Base Hospital No. 3, to Miss Laura Frances Burton, December 5.

ASST. SURG. JAMES E. MILLER, JR., U. S. N. R. F., Chicago, on duty at Sacramento, Calif., to Miss Lucille Thomas of Sacramento, September 5.

WALTER FULLARTON MACKLIN, M.D., Flushing, L. I., N. Y., to Mrs. Belmont Burdette Magee of Great Neck, L. I., N. Y., December 5.

HARRY HAMPTON DONNALLY, M.D., Washington, D. C., to Miss Bessie Arnold Stearnes of Richmond, Va., December 7.

JAMES FREDERICK GAYLORD, M.D., Springfield, Mass., to Miss Helen Southworth Jones of Suffield, Conn., December 15.

JOHN H. EAST, M.D., Denver, to Miss Mamie Sanford of Sundance, Wyo., at Deadwood, S. D., December 14.

LEROY R. STODDARD, M.D., New York City, to Miss Alice Nielsen at Greenwich, Conn., December 21.

Deaths

Theodore Caldwell Janeway, M.D., Baltimore, died of pneumonia, Dec. 27, 1917, aged 45 years. Dr. Janeway was a graduate of Columbia University, 1895; instructor in bacteriology in Columbia University, 1895-1896; intern in St. Luke's Hospital, 1897; instructor and lecturer in the University and Bellevue Medical College, 1898-1906; associate in clinical medicine in the College of Physicians and Surgeons, Columbia University, 1907; professor of medicine, 1909; visiting physician to St. Luke's, the City and the Presbyterian hospitals, New York; physician-in-chief to Johns Hopkins Hospital, and professor of medicine in the Johns Hopkins University under the Welch Fund, 1914. He was a Fellow of the American Medical Association; a member of the editorial board of *The Archives of Internal Medicine* since 1908, and a member of the board of scientific directors of the Rockefeller Institute for Medical Research since 1911.

Dr. Janeway offered his services to the Army immediately after war was declared by this country. His services were accepted and he was assigned to active duty in the Surgeon-General's Office in Washington. There he had general direction of the Division of Internal Medicine. Through his efforts, and with the cooperation of Major Warfield T. Longcope, the splendid personnel of the internists who have had charge of the cantonments and camps was obtained. He had recently made a personal investigation of the outbreaks of measles and pneumonia at certain of the cantonments. In addition to the almost night and day work at the Surgeon-General's Office, Dr. Janeway conducted two clinics a week in Baltimore, and this in addition to the energy required in the investigation of the cantonments probably weakened his power of resistance. Few men have done more to advance the pure science of medicine in this country than did Dr. Janeway. He was a man of lovable character, a hard worker, cut down at the time that he was accomplishing his greatest good.

William Joseph Hearn, M.D., Philadelphia; Jefferson Medical College, 1867; aged 74; formerly a Fellow of the American Medical Association; anesthetist and private assistant to Dr. Samuel D. Gross; appointed chief of clinic at the opening of Jefferson Hospital in 1877; assistant demonstrator in his alma mater from 1871 to 1879; later demonstrator of anatomy, professor of principles and practice of surgery, and clinical surgery; and emeritus professor of surgery in his alma mater; quiz-master in surgery for five years; the first to give a course of instruction in the microscopy and esthology of tumors; instructor in surgery and bandaging in Dr. McClellan's School of Anatomy; for several years surgeon to the Philadelphia General Hospital; a member of the American Surgical Association, and Philadelphia Academy of Surgery; died at the home of his daughter in Media, Pa., December 21, from pneumonia.

Charles Greenleaf Carleton, M.D., Lawrence, Mass.; Harvard Medical School, 1867; aged 74; a Fellow of the American Medical Association; president of the medical staff and consulting physician of the Lawrence General Hospital; consulting physician to the Danvers, Mass., Lunatic Hospital; Medical Cadet and Acting Assistant Surgeon in the Army during the Civil War; city physician of Lawrence, in 1895-1896; once president of the Essex North District Medical Society; president of the Lawrence Anti-Tuberculosis League, from 1908 to 1912, who was given a complimentary dinner in August last, in honor of his completion of half a century of practice, died at his home, December 17, from heart disease.

Hugo Summa, M.D., St. Louis; University of Munich, Germany, 1884; aged 58; a Fellow of the American Medical Association, and a well known pathologist and diagnostician of St. Louis; for more than twenty years professor of medicine in the St. Louis University and Marion-Sims Medical College; a frequent contributor to the medical literature; consulting physician to the St. Louis City Hospital and St. Mary's Infirmary, and physician to the Rebekah Hospital; died at his home, December 15, from heart disease.

Charles Wellman Mitchell, M.D. Baltimore; University of Maryland, Baltimore, 1881; aged 58; a Fellow of the American Medical Association; professor of pediatrics and clinical medicine in his alma mater; visiting physician to the University Hospital, and consulting physician to the Presbyterian Eye and Ear Hospital and Hospital for Crippled Children,

Baltimore; well known as a specialist in diseases of children; died at his home, December 28, from pneumonia.

Hugh Jones Edwards, M.D., Milwaukee; Rush Medical College, 1905; aged 41; for several years physician for the Milwaukee Branch of the International Harvester Company; died at his home, December 21, from the effects of an incised wound of the throat, believed to have been self-inflicted, with suicidal intent, while despondent on account of ill health.

James L. Hensley, M.D., Marion, Ohio; Eclectic Medical Institute, Cincinnati, 1867; aged 85; a member of the staff of the Marion City and County Hospital; a licensed preacher of the United Brethren Church; at one time a member of the state legislatures of Ohio and West Virginia; died at his home, December 21, from cerebral hemorrhage.

Jeremiah Crisp Bartlett, M.D., Springfield, Ohio; Medical College of Ohio, Cincinnati, 1865; University of Michigan, Ann Arbor, 1868; aged 72; for many years a practitioner of Marietta and Cambridge, Ohio, but for the last four years an inmate of the Masonic Home, Springfield, Ohio; died in that institution, December 16, from senile debility.

Theodore Gawn Finley, M.D., Los Angeles; University of Southern California, Los Angeles, 1908; aged 42; a Fellow of the American Medical Association; formerly assistant superintendent of the Los Angeles County Hospital; surgeon of the Los Angeles Gas and Electric Corporation; died in the Sisters' Hospital, Los Angeles, December 17.

Edward Martin Schaeffer, M.D., Washington, D. C.; George Washington University, Washington, D. C., 1868; aged 74; a member of the Medical Society of the District of Columbia; formerly hospital steward and acting assistant surgeon, United States Army; a hand-writing expert; died at his home, November 30, from heart disease.

Frank Wentworth Plummer, M.D., Malden, Mass.; Harvard Medical School, 1895; aged 47; a Fellow of the American Medical Association; visiting physician to the Malden Hospital; chairman of the Malden board of medical inspectors of schools; died at his home, December 15, from erysipelas complicated by pneumonia.

William Daniel Whitten, M.D., San Diego, Calif.; University of Michigan, Ann Arbor, 1902; aged 37; a Fellow of the American Medical Association; formerly assistant surgeon to the Copper Range Consolidated Copper Company, Baltic, Mich.; died at the Pottenger Sanatorium, Monrovia, Calif., December 5.

William L. Galloway, M.D., St. Louis; Boston University Medical School, 1888; aged 57; professor of dermatology in the Homeopathic Medical College of Missouri, and dermatologist to the Christian Hospital of St. Louis; died in Barnes' Hospital, St. Louis, December 14, a week after a surgical operation.

Samuel D. Holcomb, M.D., Crystal River, Fla.; Western Reserve University, Cleveland, 1884; aged 61; for thirty-eight years a practitioner of Oakland and Wayne counties, Mich.; for many years vice president of the Farmington, Mich., State Bank; died at his home, December 11.

Martin Augustus McGovern, M.D., New York; Bellevue Hospital Medical College, 1877; aged 67; from 1884 to 1916 surgeon of the Police Department of New York; and for a time an official of the department of health; died at his home, December 16, from cerebral hemorrhage.

Albert Holman, M.D., Butler, Pa.; Jefferson Medical College, 1881; aged 64; formerly a Fellow of the American Medical Association; a member of the Medical Society of the State of Pennsylvania; died at his home, December 13, from cerebral hemorrhage.

John Thomas Sharkey, M.D., Excello, Ohio; University of Cincinnati, 1917; aged 24; an intern in the Good Samaritan Hospital, Cincinnati; died in that institution, September 17, from acute dilatation of the stomach, following an operation for appendicitis.

Martin Leland Dollahan, M.D., Chicago; Rush Medical College, 1917; aged 26; an intern at Presbyterian Hospital, Chicago; died in that institution, December 15, from septicemia secondary to an infection of the hand due to a necropsy wound.

Enoch James Yager, M.D., Graysville, Ind.; Kentucky School of Medicine, Louisville, 1890; aged 69; a pioneer practitioner of Sullivan County, Ind., and a charter member of the Sullivan County Medical Society; died at his home, December 10.

THEODORE CALDWELL JANEWAY, M.D., 1872-1917
MAJOR, M. R. C., U. S. ARMY

William Adley Hemphill, M.D., St. Louis; Washington University, St. Louis, 1874; aged 67; for forty years a practitioner of Elsberry, Mo.; died in the Deaconess Hospital, St. Louis, December 14, after an operation for disease of the bladder.

Linnaeus Victor Gibbs, M.D., Huntington, Mass.; University of Vermont, Burlington, 1880; aged 76; a member of the Massachusetts State Medical Society; died at his home, October 16, from arteriosclerosis.

William Edward Harwood, M.D., Petersburg, Va.; Medical College of Virginia, Richmond, 1873; aged 70; a member of the Medical Society of Virginia; a Confederate veteran; died at his home, about December 11.

James C. McMechan, M.D., Cincinnati; Medical College of Ohio, Cincinnati, 1868; aged 70; a member of the Ohio State Medical Association, and Cincinnati Academy of Medicine; died at his home, November 28.

Andrew T. Sherman, M.D., Detroit; Detroit College of Medicine and Surgery, 1895; aged 52; a Fellow of the American Medical Association; died at his home, December 9.

John Burt Williams, M.D., Sterlington, La.; University of Tennessee, Nashville, 1909; aged 34; a member of the Louisiana State Medical Association; died at the home of relatives near Antioch, La., December 6.

Glen Thompson, M.D., Salina, Kan.; Hahnemann Medical College, Chicago, 1906; aged 41; a member of the Kansas Medical Society; died at his home, December 2, from typhoid fever.

Thomas A. Carroll, M.D., Windgap, Pa.; Baltimore Medical College, 1904; aged 36; a member of the Medical Society of the State of Pennsylvania; died at his home, December 5.

Joseph Braunstein, M.D., Byron Hot Springs, Calif.; University of Vienna, Austria, 1878; aged 65; died in his apartment in the Hotel Granada, San Francisco, December 16.

Abraham W. Green, M.D., Medical Lake, Wash.; Medical College of Indiana, Indianapolis, 1887; aged 75; died at his home, November 7, from cerebral hemorrhage.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

HEMO-THERAPIN

Report of the Council on Pharmacy and Chemistry

The following report on Hemo-Therapin has been adopted by the Council, and its publication authorized.

W. A. PUCKNER, Secretary.

According to the Hemo-Therapin Laboratories of New York City:

"Hemo-Therapin is a combination of highly refined creosols and phenols (which have been detoxicated by special processes) with salts of iron, potassium, sodium, phosphorus and calcium in minute but physiologic proportions—the solution as a whole being designed to approximate closely in various fundamental details the chemistry of the blood."

No statement is made as to the quantities of the several ingredients, nor is any information given as to the identity of the "creosols" and "phenols," nor the nature of the processes whereby these are "detoxicated." It is further claimed that it is:

". . . the composite character of Hemo-Therapin, the relative proportions and balance of its several ingredients, and the action of the compound as a whole, to which its potency is due."

And it is suggested that:

"It will be apparent that the ingredients which enter into the composition of Hemo-Therapin, a remedy used intravenously exclusively, have been selected with the utmost care with the object of assuring not only maximum therapeutic potency but also *absolute safety and freedom from all dangers of toxic or other unpleasant or harmful action.*" [Italics in the original.]

The advertising does not explain, however, why the complex preparation should be therapeutically efficient or why the intravenous administration of this mixture should be absolutely safe and free from toxic or harmful action. Of the origin of Hemo-Therapin it is said:

"For many years Dr. E. B. Witte, a prominent physician of Trenton, N. J. [apparently owner of the Hemo-Therapin Laboratories] has devoted himself to the study of the blood. As a result of his researches, he early determined that when the blood is close to normal standards, the body is well nourished, the natural waste products are properly eliminated, an effective resistance is offered to the invasion of pathogenic bacteria, and the various functions of the body are kept normally active. But when, for one reason or another, the blood falls away from normal standards, the nutrition of the body suffers, the elimination of waste products is impaired, the resistance to germ attack is weakened, and the various functions of the body become sadly deranged and perverted. In other words, instead of the physiologic processes of the body being normally active, as soon as the blood is depreciated, they become depressed or deranged, with a loss of the physiologic harmony or equilibrium that constitutes a state of health.

"Recognizing the relation of clinical conditions to these various phenomena, Dr. Witte reached the conclusion that the correction of many aberrant or diseased conditions depended on restoring the blood to as near to its normal state as possible. He accordingly applied himself especially to investigation of the chemistry of the blood, with the object of evolving a substance in liquid form that would so closely approximate normal blood in its essential chemical characteristics that when introduced into the circulation it would bring the blood nearer to the condition in which it exists in health."

After the usual "many years of hard painstaking labor," Dr. Witte elaborated a "fluid meeting the foregoing conditions" and now the Hemo-Therapin Laboratories inform us that 5 to 10 c.c. of this synthetic blood administered once in one, two or three days in "acute affection" and at longer intervals in "chronic ills"—once a week is said to be usually sufficient—will restore blood to a normality and empower it to overcome most ills. While disclaiming that "Hemo-Therapin is an infallible panacea," the medical profession is asked to believe that:

"In erysipelas, septicemia, pyemia, the acute fevers, puerperal infection, furunculosis, carbuncles, malaria, acute rheumatism, pneumonia, typhoid fever, and in various skin diseases, such as eczema, psoriasis, herpes zoster, etc., the results have been prompt and gratifying."

It is "no less effective" in such "chronic ailments" as:

". . . diabetes, chronic Bright's disease, goiter, pulmonary tuberculosis, chronic rheumatism, the severe anemias, arterio-sclerosis [*sic!*], various nervous disorders, locomotor ataxia, varicose and indolent ulcers. . . ."

Evidence of the virtues of Hemo-Therapin is submitted as a series of "case reports"—unsigned—which bear a striking likeness to the testimonials of "patent medicine" almanacs. A specimen of the "case reports" is the following:

"Blood Poisoning due to Snake Bite.—CASE 9.: MRS. ————; age, 52; was bitten by a poisonous snake—a copperhead—seventeen years ago. On the anniversary of the bite the arm would swell to more than twice its normal size and there would be pain, chills and fever. After a month of this the acute symptoms would disappear and the arm would show large scaly blotches which upon being removed would disclose a thin mucous liquid. Throughout the seventeen years pain was constant, being particularly acute in midsummer around the anniversary of the bite. This patient had consulted many physicians during the seventeen years of suffering without any relief. Large doses of narcotic remedies were necessary each day to subdue the pain. Twenty-four hours after the first injection of Hemo-Therapin all pain was dissipated. After four treatments the patient was considered well and there has been no return of any of the symptoms since the last treatment six months ago."

Hemo-Therapin is sold in ampules: 6 for $5 and 12 for $10, and a circular sent to a physician contained this typewritten note:

"FEES.—While the physician's fee is not regulated by this company, the physicians who use Hemo-Therapin get $5.00 and $10.00 for each treatment."

[EDITORIAL COMMENT.—During 1917 advertisements of Hemo-Therapin have appeared in the following medical journals:

Medical Record
New York Medical Journal
Medical Fortnightly
Pacific Medical Journal
Western Medical Review
Medical Council
Medical Times
American Journal of Surgery
Therapeutic Gazette
Texas Medical Journal
Archives of Pediatrics
Medical World
Medical Standard
Charlotte Medical Journal
International Journal of Surgery
Critic and Guide
Urologic and Cutaneous Review
American Medicine
Medical Summary
Medical Sentinel
American Journal of Clinical Medicine
Medical Herald
Medical Review of Reviews

VENOSAL

Report of the Council on Pharmacy and Chemistry

The following report on Venosal has been adopted by the Council, and its publication authorized.

W. A. PUCKNER, Secretary.

"Venosal" is one of the products of the Intravenous Products Company, Denver, Colo. Its composition has been variously, and obscurely, described:

"Venosal is a sterile solution representing 1 gm. (15.4 grains) of salicylates in combination."

"Venosal is a sterile solution representing 1 gm. (15.4 gr.) of salicylates in combination, together with colchicum."

"This is a product for intravenous use. The composition of which is Sodium Salicylate, 15.4 grs. (1 gm.), Iron Salicylate a minute quantity and the equivalent of approximately 2 grs. Dried Colchicum Root."

None of these "formulas" gives the quantity of the product containing the 1 gm. of salicylate, etc., but presumably it refers to the contents of 1 ampule or 20 c.c. This inference is in accord with the analysis of the product made in the Chemical Laboratory of the American Medical Association. The analysis also brought out the fact that the amount of iron in a given ampule was 0.0008 gm. (about 1/80 grain). This trace of iron in the presence of salicylate gives the product a purple color.

Venosal is recommended for the treatment of "rheumatism," meaning, the context would indicate, infectious rheumatic fever. As colchicum has no special action on this disease and as there is no apparent reason for the employment of the trace of iron present, these additions in fixed proportions are unscientific, if not absurd. According to the advertising matter:

"Venosal . . . eliminates unpleasant digestive disturbances which frequently forbid the use of salicylates by mouth and, in addition, insures their full therapeutic value."

The statement is misleading, as the cases in which the oral administration of the salicylates is contraindicated are not "frequent" but exceptional and there is no evidence to justify

the implication that the "full therapeutic value" of salicylates cannot readily be attained by their oral use. Still more astonishing is the following claim:

"Venosal is a combination carrying the true salicylates (sodii) in doses much larger than given by mouth. With this preparation given intravenously, there is no nausea or disagreeable digestive after-effects, tinnitus aurium, or the accumulating effects of the drug; yet the specific action of the salicylates seems to be increased many-fold, according to reports received."

What are the facts? By mouth sodium salicylate is given in doses of from 3 to 15 gm. in a day; whereas Venosal is advised as 1 gm., in from one to three day intervals; as a matter of elementary arithmetic it is plain that these doses of Venosal are smaller instead of being "much larger." The absence of digestive ill effects, tinnitus, etc., is explained by the small dosage. That the specific action of the salicylates should be increased by intravenous administration is surprising when it is remembered that the drug is absorbed rapidly and completely from the intestines; in fact, the quoted statement is incredible.

The company further alleges that, on the basis of "clinical reports" it has received, it does not "hesitate to recommend this product for routine use in all streptococcic infections." Such a therapeutic suggestion is, to put it conservatively, gross exaggeration.

The whole question of the justification of using salicylates intravenously is open to grave doubt. Since it is possible to obtain the salicylate effects promptly and certainly by oral administration, the inherent dangers of intravenous medication render its routine employment unwarranted. A further objection to Venosal, especially at this time when economy is a national policy, is the unnecessarily high expense of Venosal itself and of its administration.

The referee recommends that Venosal be declared ineligible to New and Nonofficial Remedies because of conflicts with Rule 1 (indefinite chemical composition), Rule 6 (therapeutic exaggerations) and Rule 10 (unscientific composition).

Correspondence

CLASSES IN NURSING FOR PATRIOTIC WOMEN

To the Editor:—The magnitude of the conflict that has been raging for more than three years and the part we are to play in it are gradually coming home to our people. A united effort in giving our boys in the trenches and their families at home all available help is becoming increasingly important. As our Army begins active operations, the crying need will be for more trained nurses. Every shipload of soldiers going abroad will emphasize this demand, which will become more and more pressing.

As a medical man, I have a few suggestions to make for preparing to meet this situation. Briefly they are as follows:

Young women who feel the call of patriotism in this hour of the nation's peril, and who are willing to respond, can be organized into classes of from fifty to one hundred, each class to be given three months' intensive training in surgical and medical nursing, the course to include bandaging and first aid.

This training can be done with little or no expense, and without any charge whatever to the young women who are willing to take the course. I am sure that medical men throughout the city will gladly join in such patriotic effort, and give their time freely. The hospitals and medical schools will no doubt cooperate. The classes could be held at the different hospitals. Lectures and laboratory work in the various subjects could be given by persons who have had the advantage of experience at the battle fronts, and thus have first hand information as to what training is most essential.

Organizations of a similar character could be organized and, I am sure, would soon be formed in every community. The plan would in a short time become nation wide. By this method patriotic young women who are anxious to respond to the call of duty would have an opportunity to participate in the actual trials of war. The need of the medical department could then be constantly supplied with nurses from the ever increasing number of these graduates.

I have spoken to a number of physicians and each one of them was enthusiastic about the idea. I myself am ready to give my time freely, and shall be pleased to hear from any one who is interested and is willing to cooperate.

Several young women have already signified their intention of joining the first class, which is to be organized immediately.

J. M. SHAW, M.D., Chicago.

SOUND PERCEPTION IN DEAF MUTES

To the Editor:—A usable amount of sound perception in deaf mutes is of more frequent occurrence than is generally recognized. This is because neither physician nor layman clearly understands how slight a degree of hearing can be utilized for educational purposes. A child that cannot hear speech at short conversational distances will not spontaneously learn to speak, and is classed by the medical profession as a "deaf-mute." Many children, properly so classed by physicians, have, nevertheless, a sufficient power of perceiving sound to profit by special instruction adapted to train the brain to associate ideas with the imperfect sounds that can be perceived. This is possible because, by the laws of sound, the intensity with which the ear is affected varies inversely as the square of the distance, and a child who cannot hear a word spoken at a distance of a yard may be able to hear it at a distance of an inch, since the impression on the ear would then be 1,296 times as great, and if the sound was twice as loud as when spoken at a yard the effect would be 2,592 times as great.

During the past twenty-four years, 35 per cent. of the deaf children that have been brought to me for training in speech have possessed a sufficient degree of residual hearing to profit by the auricular training which we give. Probably a third of the pupils in the state institutions for the deaf throughout the country could be trained to understand spoken language through the ear if given the opportunity to learn.

Not only could their brains be trained to associate ideas with the sounds of speech, but by the conducting of some of the auricular exercises before a mirror, with special reference to articulation, a greatly improved and more natural speech could be secured from the pupil.

There are many cases in which medical and surgical skill can secure for a deaf child at least a slight power of perceiving sound, though normal hearing cannot be attained. These slight powers of hearing, if properly used educationally, can be made of great service to the child. At present, in the majority of cases, no use is made of them. The physician should exert his influence to have the child receive the proper auricular training.

JOHN DUTTON WRIGHT,
1 Mount Morris Park, West,
New York.

THE RECLAMATION OF USED ALCOHOL

To the Editor:—An article with this caption by Elizabeth Selden, superintendent of the Butterworth Hospital, Grand Rapids, Mich., appeared in the *Journal* of the Michigan State Medical Society, December, 1917, p. 499. Inferentially the article intimates that many institutions waste used alcohol that might be reclaimed with advantage and economy. If this is true, the article is timely and the information that it contains should be more widely published. The Army Medical Museum has been reclaiming used alcohol since its foundation in 1862. The process is simple enough—the evaporation by the heat of a steam coil, and condensation of the vapor by a cold water coil. The vapor that first comes over and is condensed usually gives a grade of 85; the grade then gradually falls; when it reaches 50 the process is stopped and the residue is discharged into the sewer. The still is in the open air, outside the museum annex. Of course the question is mainly an economic one—the relative cost of the installation of the still, the running of it when necessary, and the

quantity of used alcohol. In a small institution, it might be more economical to throw the used alcohol away.

D. S. LAMB, Washington, D. C.
Pathologist, Army Medical Museum.

ROENTGEN LOCALIZATION OF FOREIGN BODIES

To the Editor:—In THE JOURNAL, Dec. 1, 1917, p. 1902, there is a letter from Dr. George C. Johnston regarding my method of locating bullets and other foreign bodies (THE JOURNAL, Nov. 3, 1917, p. 1521) by means of a wire net laid on the roentgen-ray plate during the two exposures. There are seven meshes to the linear inch. With a tube distance of 21 inches and a tube displacement of 3 inches, suitable for the head, thigh or trunk (or 14 inches distance and 2 inches displacement for thinner parts), my statement was that each one-seventh inch subdivision that the image is displaced represents one-half inch distance from the foreign body to the plate. Dr. Johnston calls attention to the necessity for a correction at most distances, and I am very glad to verify his statement. The value of my method will be greatly enhanced by the use of the following table, which I have calculated since noting Dr. Johnston's suggestion.

Over the plate is galvanized iron netting of "one-eighth inch mesh." This, including the thickness of the wires, runs seven meshes to the linear inch.

Anticathode Distance, 21 Inches, Tube Displacement, 3 Inches.		Anticathode Distance, 14 Inches; Tube Displacement, 2 Inches.	
Image Displaced, ½-Inch Meshes	Distance of Foreign Body from Plate Inches	Image Displaced, ½-Inch Meshes	Distance of Foreign Body from Plate Inches
1	0.9	1	0.9
2	1.8	2	1.8
3	2.6	3	2.5
4	3.2	4	3.1
5	3.7	5	3.7
6	4.6	6	4.2
(1 inch) 7	5.3	(1 inch) 7	4.7
8	5.7	8	5.1
9	6.3	9	5.5
10	6.8	10	5.8
11	7.3	11	6.1
12	7.7	12	6.5
13	8.3	13	6.7
(2 inches) 14	8.7	(2 inches) 14	7.
15	8.9		
16	9.1		
17	9.3		
18	9.6		
19	10.		
20	10.3		
(3 inches) 21	10.5		

Except when the foreign body is in contact with the plate, or is half way between the anticathode and the plate, the rule that the displacement of the image in one-seventh inch meshes equals the distance from the plate to the foreign body in half inches is only approximate, and the table should be used for exact localization.

SINCLAIR TOUSEY, M.D., New York.

"CHOLESTEROL ESTIMATIONS IN BLOOD"

To the Editor:—In THE JOURNAL, Dec. 8, 1917, you comment upon "Cholesterol Estimations in Blood." The subject of cholesterinemia has occupied my attention and taken up a good deal of my time since 1912. During all these years I have made thousands of determinations and have tried most of the methods employed. Much has been said and written on the subject that is inaccurate, and the apparent inconsistencies are largely the result of improper interpretations of the results. The editorials and comments in THE JOURNAL should have a certain "finality" about them, and the profession ought to be able to consult THE JOURNAL as an authority, and to take for granted its editorials and its current comments. The cholesterinemia, in the diagnosis of cholelithiasis, is far from limited in its usefulness, and the findings in this condition are far from "quite inconstant." My work has shown, and continues to show, that a cholesterol determination is most helpful in the diagnosis of gallstones. The "latest statistics" of Gorham and Myers are far from final.

We all agree that a hypercholesterinemia is found in many conditions; a few conditions cause a hypocholesterinemia. But not until all coincident clinical states and conditions in an individual case are taken into consideration and properly interpreted will our "statistics," late or otherwise, be uniform and consistent. And not until we agree on a method for cholesterol determinations shall we obtain uniform results. The method I use, and have used for five years, always returning to it after trying others, was approved by Professor Autenrieth and checked up by Professor Windaus personally.

EDWIN HENES, JR., M.D., New York.

[COMMENT.—While we appreciate the high standard which our correspondent demands of the editorial pages of THE JOURNAL, we must remind him that there is no "finality" in science. The "truths" of science and even the dictates of religion have no absolute or necessarily permanent values; we must keep the open mind and be prepared for review and revision at all times. The regular reader of our editorial columns will discover that they not infrequently ask questions or present conflicting points of view. Probably in the problem here at issue further evidence will necessitate a new statement. We agree that the methods for estimation of cholesterol are far from satisfactory—even if they are approved by German professors.—ED.]

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DIAZO REACTION IN TUBERCULOUS CHILDREN—TUBERCULOUS MENINGITIS IN INFANTS

To the Editor:—Could you publish in THE JOURNAL a brief abstract of the following articles: (1) Schwab, J. B.: "Diazo Reaction in the Prognosis of Tuberculosis in Children," *Nederlandsch Tijdschrift voor Geneeskunde*, 1917, **1**, 1010.

(2) Bordet, E., and D'Ovidio, R.: "Tuberculous Meningitis in Infants," *Semana médica*, 1917, **24**, 385.

MAY MICHAEL, M.D., Chicago.

ANSWER.—Schwab comments on the difficulty of estimating the prognosis in children. She mentions in particular the case of a child of 2 whose mother and six of the other children had died from tuberculosis, and the child itself presented high temperature, rapid pulse, extensive pleural effusion and changes in the lungs, and was living under unfavorable conditions on account of an inundation. Three months later the effusion had been absorbed, and except for pleural adhesions all seemed to be normal. The diazo and the urochromogen reaction had been constantly positive at first, but they veered to negative afterward. All the signs were manifestly misleading. This was confirmed by similar experiences with the diazo reaction in a hundred other tuberculous children, and the urochromogen reaction in fifty. The children have been under observation for various periods, some only a few days and others up to seven years. Among the children there were 23 with tuberculous meningitis; 15 with generalized tuberculosis; 5 with pulmonary plus peritoneal tuberculosis; 10 with tuberculous peritonitis; 33 with pulmonary tuberculosis, and the others had tuberculous pleurisy or glands. The diazo was constantly negative in 55, including 36 progressive and fatal cases. Of the 27 with constantly positive diazo, 23 have died since. Equally contradictory results were obtained in the cases with positive diazo veering to negative, or vice versa. The urochromogen reaction seemed to parallel the diazo, with a few exceptions. It did not seem to be more sensitive than the latter. In 7 cases the diazo varied from positive to negative repeatedly; the clinical prognosis in this group was always dubious to grave. The article was listed in THE JOURNAL, June 23, 1917, p. 1952, showing that the diazo is not a reliable guide for the prognosis.

The article "Tuberculous Meningitis in Infants" was summarized in THE JOURNAL, June 23, 1917, p. 1951, Abstract 76.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, Jan. 8. Chairman, Dr. S. W. Welch, Montgomery.

ARIZONA: Phoenix, Jan. 7-8. Sec., Dr. Coit I. Hughes, 21 E. Washington, Phoenix.

CALIFORNIA: Los Angeles, Feb. 18. Sec., Dr. Charles B. Pinkham, State Capitol, Sacramento.

COLORADO: Denver, Jan. 8. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

DISTRICT OF COLUMBIA: Washington, Jan. 8. Sec., Dr. Edgar P. Copeland, The Rockingham, Washington.

HAWAII: Honolulu, Jan. 10-13. Sec., Dr. G. A. Batten, Box 375, Honolulu.

ILLINOIS: Springfield, Feb. 6-7. Supt. F. C. Dodds, Springfield.

INDIANA: Indianapolis, Jan. 8-10. Sec., Dr. W. T. Gott, 84 State House, Indianapolis.

IOWA: Des Moines, Feb. 5-7. Sec., Dr. G. H. Sumner, Capitol Bldg., Des Moines.

KANSAS: Topeka, Feb. 12. Sec., Dr. H. A. Dykes, Lebanon.

NATIONAL BOARD OF MEDICAL EXAMINERS: New York City, Jan. 9-17. Sec., Dr. J. S. Rodman, 310 Real Estate Bldg., Broad and Chestnut Sts., Philadelphia.

NEW MEXICO: Sante Fe, Jan. 14. Sec., Dr. R. K. McClanahan, East Las Vegas.

NEW YORK: Albany, Buffalo, New York City and Syracuse, Jan. 29-Feb. 1. Sec., Dr. W. J. Denno, Education Bldg., Albany.

OKLAHOMA: Oklahoma City, Jan. 8-9. Sec., Dr. J. J. Williams, Weatherford.

PENNSYLVANIA: Philadelphia, Jan. 8-10. Sec., Nathan C. Schaeffer, State Capitol, Harrisburg.

SOUTH DAKOTA: Pierre, Jan. 8. Sec., Dr. P. B. Jenkins, Waubay.

UTAH: Salt Lake City, Jan. 7-8. Cor. Sec., Dr. G. F. Harding, 407 Templeton Bldg., Salt Lake City.

VERMONT: Burlington, Feb. 12. Sec., Dr. W. Scott Nay, Underhill.

WISCONSIN: Madison, Jan. 14. Sec., Dr. J. M. Dodd, 220 E. Second St., Ashland.

WYOMING: Laramie, Feb. 6-8. Sec., Dr. H. E. McCallum, Laramie.

Ohio June Examination

Dr. Herbert M. Platter, secretary of the Ohio State Medical Board, reports the oral, practical and written examination held at Columbus, June 11-14, 1917. The examination covered 11 subjects and included 100 questions. An average of 75 per cent. was required to pass. Of the 157 candidates examined, 154 passed, including 1 osteopath, and 3 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Chicago College of Medicine and Surgery	(1915) 82.4;	(1916)	79.3
Hahnemann Medical College and Hospital of Chicago		(1917)	87.5
Northwestern University		(1917)	84.6
Rush Medical College	(1916) 81.8, 85.5;	(1917)	85.3
Johns Hopkins University		(1914)	86.1
University of Maryland		(1916)	81.7
Harvard University		(1905)	82.4
St. Louis University		(1917)	82

Eclectic Medical College (1917) 75, 75, 75.3, 76, 77.4, 79, 79.4, 79.7, 79.7, 79.9, 81.7, 82, 82.2, 83.4, 83.7, 84.3, 85.3, 88, 88.1.

Ohio State University College of Medicine (1917) 79.5, 79.6, 81.6, 82, 82.3, 82.3, 82.6, 83, 83.1, 83.1, 83.2, 83.3, 83.5, 83.7, 83.8, 83.8, 83.8, 83.8, 84, 84, 84, 84.1, 84.7, 84.9, 85, 85.1, 85.3, 85.4, 85.4, 85.5, 85.7, 86, 86.1, 86.5, 86.6, 86.7, 87.1, 87.3, 87.4, 87.4, 87.4, 87.5, 87.7, 87.7, 88, 88.5, 88.8, 89.2, 89.8, 89.8, 89.9, 90.3, 90.4, 91.8, 92.5.

Ohio State University, Homeopathic (1917) 79, 82.8, 83.4, 83.6, 85.4, 85.7, 90.5.

University of Cincinnati (1917) 77, 81.4, 82.1, 83.1, 83.4, 83.7, 83.7, 84.9, 85.5, 85.7, 85.9, 86.2, 86.5.

Western Reserve University (1916) 79.6; (1917) 81.9, 82, 82.8, 83, 83, 83.2, 84.1, 84.4, 84.7, 85.1, 85.1, 85.2, 85.3, 85.4, 85.8, 85.8, 85.9, 86, 86.1, 86.3, 86.5, 86.8, 87, 87.2, 87.5, 87.7, 89.3.

Hahnemann Med. Coll. and Hosp. of Philadelphia (1917) 82.5, 83.6, 87.

Jefferson Medical College of Philadelphia (1914) 85, 86.7; (1916) 85.1, 85.6, 85.9.

University of Pennsylvania (1917) 81.8, 87.3, 88.

University of Pittsburgh (1916) 82.5, 84.1, 86.4.

Woman's Medical College of Pennsylvania		(1889)	75
Vanderbilt University		(1914)	83.8
Milwaukee Medical College		(1912)	77.8
University of Athens		(1899)	75
University of Genoa		(1912)	75.1
University of Naples		(1911)	75
	FAILED		
Tufts Medical College		(1903)	63.8
Eclectic Medical College		(1917)	73.3
University of Wooster		(1877)	60.2

Maine July Examination

Dr. Frank W. Searle, secretary of the Maine Board of Registration of Medicine, reports the practical and written examination held at Augusta, July 5-6, 1917. The examination covered 9 subjects and included 90 questions. An average of 75 per cent. was required to pass. Twenty-three candidates were examined, all of whom passed. Four candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Bowdoin Medical School	(1917) 83, 84, 85, 88, 88, 89, 92.		
Boston University	(1917) 82, 86, 90.		
College of Physicians and Surgeons, Boston		(1916)	85
Harvard University	(1917) 87, 88, 89.		
Tufts College	(1900) 75, (1917) 80, 83, 87, 88.		
Long Island College Hospital		(1907)	88
University and Bellevue Hospital Medical College		(1914)	90
Jefferson Medical College of Philadelphia		(1916) 90; (1917)	89

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Chicago Homeopathic Medical College		(1888)	Dist. Colum.
Washington University		(1901)	Missouri
University of Vermont		(1916)	Vermont
Medical College of Virginia		(1899)	Dist. Colum.

Book Notices

WHITE AND MARTIN'S GENITO-URINARY SURGERY AND VENEREAL DISEASES. By Edward Martin, A.M., M.D., F.A.C.S., John Rhea Barton Professor of Surgery, University of Pennsylvania; Benjamin A. Thomas, A.M., M.D., F.A.C.S., Professor of Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine, and Stirling W. Moorhead, M.D., F.A.C.S., Assistant Surgeon to the Howard Hospital, Philadelphia. Tenth Edition. Cloth. Price, $7. Pp. 929, with 443 illustrations. Philadelphia: J. B. Lippincott Company, 1917.

Since the death of the late Professor White, the junior author has associated with him, in revision, two men qualified to assist in maintaining the standard of former editions. Of the new things incorporated, whether matters of examination, of diagnosis, or of surgical or medical procedure, only those have been included that seemed to the authors to be of permanent value. Among the new topics are a brief practical presentation of the subjects of vaccines and serums; tests of renal function valuable as relating to operative risk; high frequency desiccation in bladder and other neoplasms; conservative and radical treatment of prostatic hypertrophy; laboratory diagnosis and control of treatment in syphilis, and therapeutic measures of other varieties that have won general approval. The conservatism of the authors toward important procedures is indicated in their statement that they have not found, practically, that a continued positive Wassermann reaction is a condition to be heroically combated at the expense of the patient's health, and that they are in agreement with those who believe that symptomless syphilitics should not be subjected to prolonged and continuous treatment or intensive courses for the sole purpose of changing the reaction; they should rather have intermittent treatment throughout life, chiefly with mercury and the iodids, short of the production of drug reaction. On the controversial point of subdural injections in syphilis of the nervous system, they say they have not been convinced of the safety or special value of these.

FRACTURES OF THE LOWER EXTREMITY OR BASE OF THE RADIUS. By Lewis Stephen Pilcher, A.M., M.D., LL.D., Consulting Surgeon, Bushwick Hospital. Cloth. Price, $2. Pp. 116, with 132 illustrations. Philadelphia: J. B. Lippincott Company, 1917.

This is a well written, well illustrated little monograph based on a careful clinical and experimental study of the subject over a period of many years. Four points of special interest brought out by the author should be impressed on the minds of all who attempt to treat these fractures:

1. Many injuries about the wrist, unattended by deformity, are really fractures that are frequently overlooked unless the injured part is carefully examined by the aid of the roentgen ray. If these cases are not recognized and properly treated, subsequent deformity may result.

2. "In a considerable proportion of the cases of fracture of the base of the radius, in which appreciable displacement of the lower fragment has taken place, some actual permanent alteration of the form of the fragment has been produced, so that perfect restitution of the normal contour of the part is impossible by any treatment, and some permanent deformity is unavoidable. Some of the cancelli of the lower fragment are crushed and condensed, and in some cases more or less

absorption of the osseous tissue later takes place, so the bone is permanently shortened and the form of its extremity is changed. Such changes of the bone contour are the unavoidable result of the accident itself; they cannot be prevented by treatment, nor can their presence reflect in any unfavorable manner on the treatment given."

3. Injuries of the lower end of the radius in young persons before the completion of ossification may be followed by arrested growth of the radius with permanent increasing deformity.

4. "The chief sources of disability following this injury are the consequences of pariarticular changes, such as the matting of tendons, and the contracture of the ligaments, and the formation of fibrous bands, and adhesions, due to laceration and irritation of these structures consequent on the bony injury and displacement. Too prolonged immobilization and the undue pressure of retention splints too forcibly secured may aggravate the amount of disability referable to the injury itself."

All of these facts should be remembered in the treatment of these cases; and in all cases of injury about the wrist in children, the parents should be informed of the possibility of shortening coming on some time subsequent thereto by reason of too early ossification of the epiphyseal cartilage with arrested growth in the length of the bone.

GOVERNMENTAL PROVISIONS IN THE UNITED STATES AND FOREIGN COUNTRIES FOR MEMBERS OF THE MILITARY FORCES AND THEIR DEPENDENTS. Prepared under the Direction of Capt. S. Herbert Wolfe, Q.M., U. S. R. U. S. Department of Labor, Children's Bureau, Miscellaneous Series No. 11, Bureau Publication No. 28. Paper. Price, 25 cents. Pp. 236, with 4 illustrations. Washington: Government Printing Office, 1917.

War-time conditions inspired the collection of the material in this bulletin, issued by the Children's Bureau. The report deals with all the various types of pensions granted by the different belligerent nations. For the benefit of our own country, whose pension laws were admittedly inadequate to meet the emergency, a careful study was made of the various systems of caring for soldiers and their dependents in Australia, Austria, France, Germany, Great Britain, Italy, the Netherlands, New Zealand, Russia, South Africa and Switzerland. Special attention is called in the bulletin to the tendency of European nations to make almost universal provision for separate allowances paid to the families of men in active service. This practice contrasts sharply with the policy of the United States, which made no allowance for the families of men in active service. Great Britain and its colonies and Russia pay regular sums to the wife and children of every enlisted man, the allowance, in many cases, varying according to the size of the soldier's family. In other countries, this substitute for the breadwinner's earnings is granted only in case of need, the amount often being determined, as in Holland, by the economic status rather than the size of the family. Separation allowances, maternity benefits, indemnities for large families, and disability and service pensions are common in practically every country. Switzerland has their equivalent in a system of military and civil insurance described at length in the report.

ELEMENTS OF HYGIENE AND PUBLIC HEALTH. A Textbook for Students and Practitioners of Medicine. By Charles Porter, M.D., B.Sc., M.R.C.P., Medical Officer of Health, Metropolitan Borough of St. Marylebone. Cloth. Price, $4.15. Pp. 411, with 98 illustrations. New York: Oxford University Press, 1917.

This book may be perhaps best described by the word old fashioned. While some of the results of modern investigation are given place in it, there is also much material of doubtful value at the present time. The chapter on ventilation furnishes a good instance of a somewhat outgrown point of view. In discussing sewers, the author evidently feels some reluctance about dropping the notion that "bacteria may have come from the defective drains" (page 223). The text contains a good deal of repetition, and some of the illustrations, such as those of eight different types of water closet, seem somewhat superfluous. The book would be more useful if unnecessary material could be eliminated, and a more positive mode of statement adopted.

Social Medicine, Medical Economics and Miscellany

WHAT ONE LOCAL BOARD FOUND OUT

Another Argument for Yearly Physical Examinations

EDWARD F. HURD, M.D.
NEW YORK

The accompanying table sums up the work done by the examining physicians of Local Board for Division 20, Bronx, New York City, under the Selective Service Act of May 18, 1917. I acknowledge my debt to Dr. Arthur J. O'Leary, assistant register of records, Department of Health, New York City, and one of the examining physicians, for valuable help in the compilation.

In order to estimate justly the value of these figures, it is necessary to understand by whom and under what conditions the data were gathered. The medical member of the board had secured as his associates six Bronx physicians, all but one of whom have been engaged for many years in the general practice of medicine; the exception was a specialist in diseases of the eye, ear, nose and throat. For the examinations the large gymnasium of New York University was used, and the smooth and rapid manner in which 1,800 men were examined within its commodious walls did not fail to impress all who saw it.

The candidates waited on benches under spreading shade trees until their order numbers were posted on the bulletin board by the clerk. A group of ten were admitted at one time and shown to seats in the middle of the floor immediately in front of a desk at which sat the medical member of the board and one of the examining staff. The member of the board asked the few questions made mandatory by the Selective Draft Law, and obtained the signature of the person to be examined. The man was then told to retire behind the screen. When he stepped, stripped, from behind the screen, he was taken in charge by the first physician, who weighed him and took his height and chest measurements. He was then passed to the second physician, who examined his teeth, nose and throat, and made a general inspection for deformities and abnormalities, including flatfoot, hammertoe, etc. The third physician examined by stethoscope the heart and the lungs. The fourth covered hernia, varicocele, hemorrhoids and history as to venereal disease; if any question elicited a suspicion of diabetes or nephritis, a sample of urine was obtained in the presence of the physician, and a university professor of chemistry made the examination at once, the result being known before the man was dressed. The fifth physician was stationed in a small room fitted with Snellen's test cards, and there examined the eyes and the ears. The physical examination blank was passed from physician to physician, each making a record of his findings.

If during the course of the examination any physician detected a condition which he considered sufficient to disqualify, he consulted the sixth physician, who was on duty for reexamination. These two failing to agree, they appealed to the board physician: the verdict of two of the three was final.

A few cripples—having curvature of the spine, amputations, etc.—presented themselves and were loath to strip before the others. These were taken in charge by one physician and privately examined, the result being verified by a second physician, as the law required. In the rare instances of tuberculosis the candidates were directed, for a sputum examination, to the Clinic of the Department of Health, on whose positive report they were at once disqualified.

With the foregoing arrangements, it was possible in a few hours to examine 175 men with such thoroughness that to date, with 70 per cent. of the quota in camp, not a man has been returned because physically deficient. Before leaving the building, each man was informed as to the result of his physical examination and given an opportunity to file a claim for exemption or discharge, the chairman of the local board taking charge of this branch of the work.

The examining physician of the board feels that from the results of these examinations, made under such favorable conditions, the medical profession may draw some valuable conclusions. The total number of examinations made was 1,800; the number of rejections for physical reasons was 705, or approximately 39 per cent. of the total. This seems a staggering proportion of unfitness among men between the ages of 21 and 31, a time of life when physical perfection is most likely to be found; but when we consider that 232 of these were underweight, a condition which may not mean any permanent physical defect, the high rate becomes more readily understandable. This figure would have been much higher had not the examining physician departed from the arbitrary dictum of the rules and regulations as to relative weight and height. In cases in which the subject, although underweight, was in all other essentials in good physical condition, he exercised his personal judgment to the effect that camp life would probably improve the weight, and accepted the man. Conversely, of overweights: none of the latter were rejected unless really obese.

We find of these 232 men underweight that the greatest number were aged 29; the smallest, 27. Out of 477 of the native-born, 151 were underweight; of the 149 Russians, sixty-six. Occupation had a determining effect on the question of underweight: out of a total of 207 clerks, seventy-four were underweight.

The next most frequent cause for rejection was hernia. Out of 705 canidates rejected, 186 suffered from it in various forms and degrees. The largest number were in the thirtieth year of age. Nativity seems to bear no obvious relation to this disqualification; occupation, however, does. Out of 207 clerks we find that fifty-three, or nearly one quarter, are affected with hernia.

The surprising number of heart lesions among these young men was a subject of comment by the physicians. After a most painstaking examination, eighty-three men were rejected for organic troubles, the class of clerks again ranking highest, with twenty-six.

The other causes of rejection were: flatfoot, 22; varicocele, 15; bad teeth, 20; tuberculosis, 4; bad eyes, 30; deformities, including hammertoe, etc., 36; hemorrhoids and varicose veins, 8; obesity, 22; albuminuria, 11; bad ears, 3; other causes, including chorea, insanity, etc., 33.

The findings of this board show that men of draft age who hold clerical positions are the poorest physical specimens. We shall waive the question whether deficient physical equipment impelled these men toward the inactive occupation of the clerk, or whether the sedentary life of the clerk has resulted in poor physical condition: there is probably a good deal to be said on both sides. Undoubtedly chronic constipation, lack of exercise and fresh air, with the resulting soft, flabby muscles, would seem to be the principle causes of underweight and hernia. Take these men out of their stuffy offices and put them into camp, make them live in the open with regular exercise and regular hours, and they will soon be brought up to the standard.

If the findings of other local boards are similar to these—and a compilation of such data from all districts of Greater New York would be of enormous statistical value—some means ought to be devised to improve the physical condition of these young men, who should, at this period of their lives, be at the highest point of bodily efficiency. Taken alone, such an index points unmistakably to the thinking physician his obvious duty, and though the day of the family doctor is fast fading in the blaze of the specialist's rise, there remain surely many physicians who have enough interest in the families of their patients to offer suggestions to those members who do not consult him professionally, but who nevertheless need and would heed his advice.

1853 Anthony Avenue.

PHYSICAL CAUSES FOR REJECTION BY AGE, NATIVITY AND OCCUPATION

	Underweight	Hernia	Flatfoot	Varicocele	Bad Teeth	Tuberculosis	Bad Eyes	Deformities	Hammer Toe	Heart	Hemorrhoids and Varicose Veins	Obesity	Albuminuria	Bad Ears	Others	Total
Age																
21	18	15	....	3	3	....	2	3	....	8	....	....	....	....	4	56
22	28	18	....	4	....	....	1	4	....	4	....	1	1	....	....	61
23	30	14	4	2	1	1	....	2	1	3	2	....	3	....	6	69
24	16	17	....	....	4	....	2	....	....	4	....	3	2	....	7	55
25	26	20	2	....	....	....	2	3	5	4	....	2	1	....	3	68
26	20	16	2	1	....	1	2	....	....	9	....	3	....	1	4	59
27	12	18	4	....	2	1	8	4	....	12	....	2	....	1	4	68
28	29	20	4	2	1	....	4	3	2	10	4	1	2	....	1	83
29	31	22	6	....	5	1	4	3	1	11	2	4	1	1	1	93
30	22	26	....	3	4	....	5	2	3	18	....	6	1	....	3	98
Total	232	186	22	15	20	4	30	24	12	83	8	22	11	3	33	705
Nativity—																
United States	151	141	14	8	13	2	18	16	7	58	5	17	6	1	20	477
Russia	66	34	3	2	3	1	5	4	2	18	2	3	2	....	4	149
Ireland	1	....	1	2	....	1	....	1	....	1	....	....	....	....	1	8
Germany	2	....	....	....	....	....	5	....	....	....	....	....	2	....	....	9
Italy	6	4	....	1	....	....	....	2	....	....	....	....	....	....	3	16
Austria	4	6	4	1	2	....	1	1	1	4	1	....	1	2	4	32
Sweden	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	2
Others	2	1	....	1	1	....	1	....	2	2	....	1	....	....	1	12
Total	232	186	22	15	20	4	30	24	12	83	8	22	11	3	33	705
Occupation—																
Machinist and mechanic	35	21	4	1	2	....	1	4	1	9	2	7	2	....	1	90
Laborer	30	21	3	2	6	....	4	5	2	16	1	4	2	1	10	107
Secretary	4	3	....	1	....	....	....	....	....	3	....	....	....	....	3	14
Painter	8	6	2	....	2	....	2	....	2	6	....	....	1	....	2	31
Salesman	12	8	2	....	2	....	2	2	2	4	1	3	2	....	1	41
Clerk	74	53	7	3	6	4	11	7	3	26	2	4	2	2	3	207
Policeman	....	1	....	....	....	....	....	....	....	....	....	3	2	....	....	6
Chauffeur	2	2	2	....	....	....	....	....	....	....	....	1	....	....	....	7
Manufacturer	12	14	1	2	....	....	4	4	....	1	....	....	....	....	1	39
Teacher	2	1	1	....	....	....	1	....	2	4	....	....	....	....	1	12
Civil and electrical engineer	8	6	....	2	....	....	....	....	....	4	....	....	....	....	1	21
Tailor	3	2	....	....	....	....	1	....	....	2	2	....	....	....	....	10
Others	42	48	....	4	2	....	4	2	....	8	....	....	....	....	10	120
Total	232	186	22	15	20	4	30	24	12	83	8	22	11	3	33	705

Medicolegal

A Cause of Action for Malpractice Stated

(Lueke vs. Senn (Wis.), 163 N. W. R. 171)

The Supreme Court of Wisconsin says that the complaint showed that the defendant was employed by the plaintiff, who suffered from blood poisoning following her confinement; that the defendant performed the operation known as currettement; that she had trouble with her left leg and foot, which at the direction of the defendant were elevated; that when she recovered from the blood poisoning she found her leg was stiff and could not be moved; that at the direction of the defendant she was taken to a hospital, anesthetized, and her leg broken at the knee so as to straighten it; that following the breaking of the leg it became discolored and intensely painful, which condition continued until the big toe dropped off, the leg became shriveled and wasted, and the plaintiff called in other physicians, and in order to save her life amputation of the leg was necessary. The complaint then continued:

> Plaintiff alleges further that the defendant negligently permitted said knee to become stiff and in the position in which it was by permitting it to remain in a raised condition and by supporting it in such condition. That said defendant negligently broke such knee and negligently failed to discover that in breaking such knee the blood supply below the knee had been cut off, and that such defendant negligently reported to this plaintiff that she was recovering, doing finely, and getting well. Plaintiff alleges further that solely through the negligence and wanton misconduct of the said defendant she has suffered the loss of her left limb, to her damage in the sum of $25,000.

As a second cause of action the plaintiff alleged:

> That in making the representations to her set forth in the first cause of action, concerning his ability and proficiency and in regard to her condition, the said defendant wantonly and wilfully misrepresented to her and falsified to her in such regard, and particularly in regard to the fact that she was improving, whereas she was not, and that through and by reason of such wilful and wanton misstatements the plaintiff continued under the care of the defendant, and that by reason of such continuance she was required to finally have her left limb amputated above the knee, all to her damage in the sum of $25,000.

The court is of the opinion that that part of the complaint denominated first cause of action stated facts sufficient to constitute a cause of action for that kind of negligence commonly denominated malpractice. The court is further of the opinion that the facts stated in that part of the complaint denominated second cause of action were not sufficient to constitute a cause of action showing liability for gross negligence, and that therefore but one cause of action was stated in the complaint. The only difference between the two causes of action attempted to be set forth in the complaint was that in the second the defendant was said to have "wantonly and wilfully misrepresented to her and falsified to her in such regard," etc. No additional fact or inference was stated. Calling a thing names does not change its character or composition, add to, or detract from it. Therefore the defendant's demurrer to the complaint should have been overruled as to the first cause of action and sustained as to the second cause of action.

Different Views of Claim for Fees

(Succession of Pizzati (La.), 75 So. R. 498)

The Supreme Court of Louisiana says of a claimant in this case that he was a practicing physician, and also taught the class in chemistry in a boys' high school from 9 a. m. to 2:30 p. m., for which latter he was paid $165 a month. He said that between November 2, when the decedent first consulted him professionally, and December 30, when the decedent died, he "saw" the decedent, he supposed, "altogether about 160 times" professionally. Ten of these times were prior to December 8, and were at his (the witness') office, except the first, and the treatment was for dysentery. The visits from December 8 to 11, inclusive, when the decedent was still going about, were at the latter's house, and were for a cold. This cold developed into pneumonia on the 12th or 13th, and the treatment until the 22d, inclusive, was for pneumonia. By that time the patient had recovered from the pneumonia. On the 25th the kidneys ceased functioning, and he fell into a stupor from uremic poisoning, and this continued until his death in the night of the 30th. On the 30th he was evidently beyond treatment, and on the 29th almost so. The physician presented a bill for $5,000. The executor allowed $250. The trial judge allowed $500. Two other physicians and the claimant himself testified that the charge was reasonable.

The claimant, the supreme court goes on to say, was not shown to be one of the autocrats of the profession whose ministrations are worth whatever estimate they may choose to put on them, but to be a physician who supplemented his medical work by devoting the better part of each day to the daily routine of a boys' high school. The visits to his office were such as, the evidence showed, $2 are ordinarily charged for, and the services at the house were in the treatment of a common case of pneumonia, except during the few days intervening between the 22d and the 28th, when nothing extraordinary in the way of medical skill seemed to have been either called for or displayed. The patient also suffered from leakage of one of the valves of the heart; but this did not enter into the treatment, and could not figure in the bill. The allowance of $250 in the account was, the supreme court thinks, entirely reasonable.

On rehearing, the supreme court says that its reexamination of the testimony offered in support of the physician's opposition to the allowance convinced it that, while the claimant had somewhat overestimated the number of his consultations with the patient, the supreme court had somewhat underestimated the character of the services that he was called on to render. He testified that there were ten office consultations between November 2 and December 8, from which last-mentioned date he visited his patient at the latter's temporary residence until he died, and that he paid an average of five visits a day during that period. The patient was at first suffering with dysentery, was taken with pneumonia on the 12th or 14th, and recovered on the 22d or 23d, and, after a few days, developed toxemia, of which he died on the 30th, from which it would appear that the physician visited him for twenty-two days, which, at the average of five visits a day, would be 110 visits. Beyond that, however, it appeared that the patient was irritable and intractable, and at times violent, and that he required services from the physician which should have been rendered by the nurses and would have been rendered by them if they had been permitted. On the whole, the supreme court concludes that the compensation to be allowed should be increased to $1,000; and it is therefore ordered that the judgment before handed down be amended by increasing the amount allowed to the physician to $1,000, the succession to pay the costs of his appeal.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Roentgenology, New York

November, 1917, 4, No. 11

1 Caliper Method of Foreign Body Localization. E. S. Blaine, Chicago.—p. 544.
2 Military and Naval Use of Roentgen Ray. A. Soiland, Los Angeles.—p. 550.
3 Roentgen Diagnosis of Concurrent Gastric and Duodenal Ulcer. R. D. Carman, Rochester, Minn.—p. 552.
4 Roentgen Observations of Pituitary Region in Intracranial Lesions. G. C. Johnston, Pittsburgh.—p. 555.
5 Physiochemical Nature of Action of Radioactivity on Protoplasm. A. Richards, Crawfordsville, Ind., and A. E. Woodward, Boston.—p. 564.
6 Case of Absent Femur. H. W. Dachtler, Toledo, Ohio.—p. 570.
7 Congenital Radio-Ulnar Synostosis; Three Cases. G. F. Thomas, Cleveland.—p. 571.
8 *Roentgenization of Thymus in Exophthalmic Goiter. C. A. Waters, Baltimore.—p. 574.
9 Multiple Views on One Plate. C. B. Danruther, Laporte, Ind.—p. 576.
10 Roentgenstereoscopy Applied to Examination of Extremities. P. M. Strother, Lynchburg, Va.—p. 576.
11 Rightsided Position of Stomach in Inflammatory Conditions in Ileocecal Region. H. E. Ruggles, San Francisco.—p. 577.
12 Case of Tuberculous Spondylitis. P. Eisen, Chicago.—p. 578.

13 Case of Impaired Extension of Knee Joint. M. J. Hubeny, Chicago.—p. 579.
14 *Unusual Gallbladder Complication. J. Shoup, Washington, D. C. —p. 580.
15 Case of Dextrocardia with Mitral Stenosis. A. F. Tyler, Omaha. —p. 581.

8. **Roentgenization of Thymus in Exophthalmic Goiter.**—Ninety-nine cases of exophthalmic goiter were treated by roentgenizing the thymus alone, although a few of these cases subsequently received irradiation to both the thyroid and thymus. The types of cases irradiated include the following: hyperthyroidism, 33; exophthalmic goiter, 47; colloid goiter, 2; adenomas, 5; dysthyreosis, 2; persistent hyperplastic thymus, 4; cyst thyroid, 4; status lymphaticus, 1; myasthenia gravis, 1. Seventeen cases were irradiated before operation, 34 following operation and 6 were irradiated before and after operation, while 38 received irradiation without any surgical interference. Fifty-two cases had partial or complete lobectomy, while 11 had only one or more thyroid arteries ligated. The treatments were given in series. The final result in this series of cases was undoubted subjective improvement but without a disappearance of the cardinal objective signs of the disease.

14. **Gallbladder Complication.**—Five years after an attack of uncomplicated typhoid, Shoup's patient was seized with pain in the right hypogastrium, varying in locality and severity. The pain was described as being of a dull, heavy nature, often assuming a pressure-like character. When lying on her left side she complained of a pulling sensation which caused exacerbation of the pain. On the other hand, the intensity of the pain was somewhat relieved by wearing corsets or making pressure over the seat of pain. Operation revealed dense adhesions between the duodenum and the liver. The gallbladder fundus was connected with the duodenum by means of a tube half an inch in length and as thick as a normal appendix. The fundus of the gallbladder was empty except for a small amount of fluid which looked like duodenal contents. No bile was present in the gallbladder, but when a soft cholesterin stone which completely filled the neck of the gallbladder was removed, bile began to pour into the gallbladder through the cystic duct.

Archives of Pediatrics, New York

November, 1917, **34**, No. 11

16 Pyloric Stenosis in Infancy; Three Cases. B. K. Rachford, Cincinnati.—p. 803.
17 *Intradermal Reactions to Proteins of Infants Suffering from Gastro-Enteric Disorders. V. D. Greer, Chicago.—p. 810.
18 Improvement in Outpatient Work with Children. S. McLean, New York.—p. 818.
19 *Case of Meningococcus Meningitis in New-Born. D. J. M. Miller, Atlantic City, N. J.—p. 824.
20 Pavor Medicus. A. J. Waring, Savannah, Ga.—p. 827.
21 Three Cases of Sporadic Cretinism in One Family. C. Herrman, New York.—p. 831.
22 Importance of Preschool Period to Schoolchild. J. Levy, Newark, N. J.—p. 837.
23 *1916 Poliomyelitis Epidemic; Description of Characteristic Sign. H. Heiman, New York.—p. 846.

17. **Intradermal Reactions to Proteins of Infants.**—The striking finding of Greer's is that of twenty-six infants, twenty-three gave definite intradermal reaction to lactalbumin of the cow. Three cases reacted positively to cow's caseinogen. The much greater reactivity to lactalbumin is in agreement with the observation that almost all allergic milk reactions proceed better with lactalbumin than with caseinogen. These findings suggest that sensitization to cow's milk proteins does occur in acute or chronic gastro-enteric disturbance, and that such sensitization can be demonstrated by intradermal injection of small amounts of those proteins, and further that the lactalbumin is the protein to which, probably, sensitization most easily occurs.

19. **Meningococcus Meningitis in New-Born.**—The onset in Miller's case was with conjunctivitis, mistakenly regarded as gonorrheal. The baby was then only 2 weeks old. A bullous eruption appeared in the second week of the disease, but signs of meningitis were not apparent until the fourth week. The spinal fluid gelatinized at once. Ten punctures of the fontanel were made with no apparent ill effect beyond vomiting. The first two of these punctures were made into the ventricle; afterward, with greater accumulation, the needle probably entered only the subarachnoid space. Two hundred and sixty c.c. of serum were introduced with no signs of serum disease. There was apparent improvement in the clinical symptoms and the cerebrospinal fluid after the tenth injection of serum, with the subsequent return of active symptoms and death.

23. **Characteristic Sign of Poliomyelitis.**—A distinct tremor of the fingers observed by Heiman in a great many cases, but not sufficiently emphasized before is considered by him to be a characteristic sign in poliomyelitis.

Boston Medical and Surgical Journal

Dec. 13, 1917, **177**, No. 24

24 *Hodgkin's Disease: Treatment with Radium and Roentgen Ray. C. C. Simmons and G. Benet, Boston.—p. 819.
25 Petersham Plan for Giving Schoolchildren Dental Service. W. R. Woodbury, Rochester, N. Y.—p. 834.
26 Trinitrotoluene Poisoning in Massachusetts; Report of Cases. T. F. Harrington, Boston.—p. 838.
27 Bárány Tests as Applied to Aviators. H. L. Babcock, Boston.—p. 840.
28 Study of Some Percentage Solutions. T. J. Bradley, Boston. —p. 843.

24. **Hodgkin's Disease Treated with Radium and Roentgen Ray.**—Nineteen cases of Hodgkin's disease treated at the Huntington Memorial Hospital are analyzed by Simmons and Benet. They state that clinically, Hodgkin's is a fatal disease, that it runs an acute or chronic course, little affected by treatment as regards the ultimate fatal result. It may usually be suspected, but there is no way to make a definite diagnosis without a microscopic examination of one of the glands. It cannot be differentiated clinically from certain cases of lymphosarcoma, tuberculosis, or even inflammatory glands. As regards treatment, radium and roentgen rays have a distinct beneficial effect, radium being of more value than roentgen ray. With treatment, the glands diminish in size, and the general condition improves. The relation between the treatment and the improvement is definite, and is seen in from one to three weeks after the first application of radium. None of the patients in this series was cured, but they are all comfortable and able to attend to their duties until nearly the end of the disease. The authors advise that treatments should not be limited to the palpable glands, as is usually the case, but should be directed against the lymphatic areas of the body, the mediastinum, abdomen, etc., from the first.

California State Journal of Medicine, San Francisco

December, 1917, **15**, No. 12

29 Diseases of War: Their Prevention, Control and Treatment. L. L. Smith.—p. 487.
30 Some Properties and Actions of Tethelin, Active Constituent of Anterior Lobe of Pituitary Body. T. B. Robertson, Berkeley. —p. 491.
31 Urologic Problems. V. G. Vecki, San Francisco.—p. 495.
32 Surgical Treatment of Seminal Vesiculitis. A. B. Cecil, Los Angeles.—p. 497.
33 Mongolism. R. L. Ash, San Francisco.—p. 500.
34 *Two Cases of Amaurotic Family Idiocy (Tay-Sachs' Disease). C. W. Rand, Los Angeles.—p. 503.
35 Better Teaching in Schools of Nursing. A. C. Jammé.—p. 506.

34. **Amaurotic Family Idiocy.**—The two cases cited by Rand are almost identical in onset and course. The first patient died at the age of 15 months, the end being ushered in by convulsive attacks, The second patient, aged 13 months, has failed greatly in the past three months. It is interesting to note that the first case cited is probably the third child in a Russian-Jewish family to be afflicted with the disease. It is unusual in that sixteen years have elapsed since the last baby died.

Iowa State Medical Society Journal, Des Moines

December, 1917, **7**, No. 12

36 Syphilis of Eye. G. F. Harkness, Davenport.—p. 439.
37 Syphilis of Nose and Throat. F. W. Bailey, Cedar Rapids.—p. 446.
38 Education of Public as Factor in Public Health Work. W. A. Evans, Chicago.—p. 449.
39 Roentgen Diagnosis of Gastric Lesions. L. S. Goin, Wheeling, W. Va.—p. 453.

40 Relation of Communicable Diseases to Community and to Physician. M. F. Boyd, Iowa City.—p. 457.

Journal of Bacteriology, Baltimore

November, 1917, **2**, No. 6

41 Early Instructors in Bacteriology in United States. D. H. Bergey, Philadelphia.—p. 595.
42 Nomenclature and Classification of Bacteria. Subgroups and Genera of Coccaceae. R. E. Buchanan, Ames, Iowa.—p. 603.
43 Bacterium Pyogenes and Its Relation to Suppurative Lesions in Animals. A. R. Ward, Washington, D. C.—p. 619.
44 Influence of Hydrogen-Ion Concentration of Medium on Reproduction of Alfalfa Bacteria. E. B. Fred and N. E. Loomis, Madison, Wis.—p. 629.
45 Colon Aerogenes Group from Silage. O. W. Hunter.—p. 635.

Journal of Laboratory and Clinical Medicine, St. Louis

December, 1917, **3**, No. 3

46 *Studies on Cholesterol. Experiments Concerning Relation of Diet, Blood Cholesterol and Lymphoid Defense. G. Luden, Rochester, Minn.—p. 141.
47 *Development of Method for Early Diagnosis of Tuberculosis by Use of Roentgenographed Guinea-Pig. W. H. Eckford, Pittsburgh.—p. 175.
48 *Tungstates of Alkaloids—Experimental Pharmacologic Study. B. Fantus, Chicago.—p. 179.
49 *Three Cases Illustrating Consequences of Coronary Lesions. P. G. Woolley, Cincinnati.—p. 192.
50 Germicidal Value of Common Gynecologic Douching Agents. J. R. Stark, Cincinnati.—p. 199.
51 Experimental Study of Root-Filled Teeth. M. B. Cohen, West Salem, Ohio.—p. 202.
52 Modifications of Soxhlet Extractor. J. W. Weir, Oklahoma City.—p. 204.

46. **Studies on Cholesterol.**—Luden records in full a series of experiments on herself made to observe the relation and reciprocal action between the diet, the blood cholesterol, and the lymphocytic reaction or lymphoid defense. The influence of the chemical composition of the food on the chemical composition of the blood in increasing or diminishing the amount of cholesterol therein was clearly demonstrated. A diet which increases the blood cholesterol coincidently weakens the lymphoid defense. A diet which reduces the blood cholesterol coincidently increases the lymphoid defense. In persons predisposed to carcinoma an increase of the cholesterol and a weakening of the lymphoid defense, such as may occur with the prolonged use of a diet adapted thereto, may, perhaps, result in the development of carcinoma. Luden suggests that dietetic measures calculated to reduce the blood cholesterol and coincidently increase the lymphoid defense may yet prove to be of value in the treatment of carcinoma.

47. **Diagnosis of Tuberculosis with Roentgenographed Guinea-Pig.**—Eckford found that it is possible by means of the roentgen ray to increase the susceptibility of guinea-pigs to tuberculosis. Frequently repeated doses have a more certain effect than a single dose. The removal of a nodule from the groin for examination can be done in about two weeks and is usually diagnostic. This procedure has the advantage that in case of negative local findings the animal has the chance of developing internal lesions at a slightly later time.

48. **Tungstates of Alkaloids.**—Fantus suggests that the comparative tastelessness and slight local effects of phosphotungstates and silicotungstates of alkaloids might make these combinations therapeutically useful. The phosphotungstate and silicotungstate radicals are sufficiently nontoxic to be used for the administration of alkaloids with small dosage, such as strychnin or emetin. Inasmuch as the tungstates, when taken in liberal amounts for a long time, do have a toxic action, it is probably not advisable to use these combinations for the administration of quinin or other alkaloids that would be given in large doses, until further studies of the toxicity of these have been made.

49. **Cases Illustrating Coronary Lesions.**—The cases cited by Woolley illustrate the effects of gradual cutting down of the blood supply to the myocardium. In two cases the process was diffuse, slow and gradual, and led to general ventricular dilatation. In the other, the process was limited to one coronary and, in particular, to one branch. During a certain period the result was gradual though localized, dilatation tending to the production of a cardiac aneurysm. In the final period the process was abrupt and produced an infarct.

Journal-Lancet, Minneapolis

Dec. 1, 1917, **37**, No. 23

53 Some of the Unsettled Problems in Surgery. S. J. Mixter, Boston.—p. 759.
54 Foreign Protein Injections in Treatment of Acute Infections. J. G. Cross, Minneapolis.—p. 764.
55 Relation of Thyroid to Other Ductless Glands. E. C. Kendall, Rochester.—p. 768.
56 Focal Infections in Nose and Throat. Means of Diagnosis and Elimination. W. E. Patterson, Minneapolis.—p. 771.
57 Myasthenia Gravis; Report of Three Cases. L. M. Crafts, Minneapolis.—p. 774.

December 15, No. 24

58 *Jejunostomy: Its Indications and Methods. C. H. Mayo, Rochester.—p. 793.
59 Birth Rate in Registration Area of United States. F. L. Adair, Minneapolis.—p. 796.
60 *Rickets, with Especial Reference to Premature Infants. E. J. Huenekens, Minneapolis.—p. 804.
61 Nephrolithiasis; Report of Cases. A. C. Strachauer, Minneapolis.—p. 807.

58. **Jejunostomy: Indications and Methods.**—The operation of jejunostomy has been made in the Mayo Clinic in forty-three cases for nutritive purposes since 1910. In the larger number of cases the operation was necessitated by cancer, and it was palliative. Because of the serious condition of the patients the primary mortality was high and the palliation brief. Mayo says that the operation is not one of great utility, except in a few rare cases of nonmalignant obstruction, or for the temporary relief of gastric fistula following perforation and operation. Twelve of the 43 patients died within a week, 4 died within a month, 4 within two months, 7 within a year and 3 within a year and a half. Thus in all of these cases the operation served its purpose, namely, that of affording temporary or permanent relief of the condition which necessitated the operation.

60. **Rickets, with Reference to Premature Infants.**—According to Huenekens, rickets is found in 92 per cent. of premature and twin infants. This is due to a deficiency of calcium at birth. Calcium in the form of tricalcium phosphate must be added to the usual treatment.

Kentucky Medical Journal, Bowling Green

December, 1917, **15**, No. 12

62 Trend of Medical Education. P. H. Stewart, Paducah.—p. 500.
63 Plea for More Rational Therapeusis. S. J. Meyers, Louisville.—p. 503.
64 Ambroise Paré and Surgery of Renaissance. F. L. Koontz, Louisville.—p. 506.

Medical Record, New York

Dec. 15, 1917, **92**, No. 24

65 Treatment of Hypoplastic and Mentally Impaired Children. E. B. McCready, Wildwood, Pa.—p. 1015.
66 Case of Bilateral Ureteral Calculus. L. Buerger, New York.—p. 1020.
67 Library of Army Medical Museum. R. W. Shufeldt, Washington, D. C.—p. 1022.
68 Case of Intrathoracic Thyroid Tumor. H. M. Moses, Brooklyn.—p. 1025.
69 Loss of Consciousness and Automatism in Inebriety. T. D. Crothers, Hartford, Conn.—p. 1026.
70 Medicine and Moon; Beliefs of Other Days. H. D. King, New Orleans.—p. 1030.

Michigan State Medical Society Journal, Grand Rapids

December, 1917, **16**, No. 12

71 *Compound Fracture Treated by Bismuth Iodoform Paste—Bipp. H. R. Leibinger, Detroit.—p. 489.
72 Discussion of Fifteen Hundred Industrial Injuries. F. C. Warnshuis, Grand Rapids.—p. 490.
73 Soldier's Heart. W. H. Marshall, Flint.—p. 494.
74 Anesthesia and Its Relation to Good Surgery. C. H. Branch, Muskegon Heights.—p. 496.
75 Reclamation of Used Alcohol. E. Selden, Grand Rapids.—p. 499.
76 Eutocia Attained by Rational Methods Rather than by Excessive Narcosis During Labor. W. E. Welz, Detroit.—p. 501.

71. **Fracture Treated by Bismuth Iodoform Paste.**—Cases are cited by Leibinger which illustrate the possibility of getting early primary union in wounds which by usual

methods would require weeks and months for healing with suppuration and granulation. Wound edges may be brought together at once before scar retraction renders subsequent suturing impossible.

Military Surgeon, Washington, D. C.

December, 1917, **41**, No. 6

77 Responsibilities of Medical Profession in This War. V. C. Vaughan.—p. 651.
78 Problem of Pulmonary Tuberculosis. E. Rist.—p. 659.
79 General Aspects of War. T. H. Goodwin.—p. 669.
80 War Neuroses (Shell Shock). T. W. Salmon.—p. 674.
81 From "Over the Top" to Casualty Clearing Station. E. K. Johnstone.—p. 694.
82 Statistics of Austro-Prussian ("Seven Weeks") War, 1866, as Measure of Sanitary Efficiency in Campaign. F. H. Garrison. —p. 711.

Missouri State Medical Association Journal, St. Louis

December, 1917, **14**, No. 12

83 Obstetric Résumé. F. T. VanEman, Kansas City.—p. 503.
84 *Factors for Safety and Ultimate Results in Goiter Operations. C. Potter, St. Joseph.—p. 506.
85 Abdominal Cesarean Section for Eclampsia; Report of Two Cases. E. L. Dorsett, St. Louis.—p. 512.
86 Chronic Infective Endocarditis: S. Viridans; Case Reports. A. Sophian, Kansas City.—p. 514.
87 *Treatment of Acute Rheumatic Fever. J. C. Lyter, St. Louis.—p. 517.
88 Protein Indigestion in Infant. J. Zahorsky, St. Louis.—p. 520.
89 Benign and Malignant Achylias Differentiated by Gastric Albumin. D. L. Penney, St. Louis.—p. 522.

84. **Making Goiter Operations Safe.**—In handling goiter Potter urges that particular stress be laid on combined methods of treatment and care; care in the suggestive psychology, care in preoperative treatment, care in dividing the operation into stages with sufficient interval between steps, care in dissection around the more delicate neck structures, care in anesthesia and care in the operation and after-treatment. Rough radical treatment spells failure; gentleness success.

87. **Treatment of Acute Rheumatic Fever.**—Lyter reports on sixteen cases of acute rheumatic fever treated by the administration of typhoid vaccine, the typhoid vaccine being used only as a standardized foreign protein. These patients were given 1 c.c. of typhoid vaccine intravenously daily until a cure was effected. Three of the sixteen have thus far had recurrences. Lyter is of the opinion that the administration of a foreign protein intravenously is justifiable in all cases of acute rheumatic fever in which some primary focus of infection, as apical abscesses, infected tonsils, gallbladder, appendix or genito-urinary tract can be demonstrated and removed and those which prove refractory to general and salicylic treatment.

New Jersey Medical Society Journal, Orange

December, 1917, **14**, No. 12

90 Treatment of Infection Following Labor, Mature and Premature. P. B. Bland, Philadelphia.—p. 453.
91 War and Tuberculosis. E. S. McSweeny, New York.—p. 457.

New York Medical Journal

Dec. 8, 1917, **106**, No. 23

92 Tonsilloscopy and Curettage of Tonsils in Adults. T. R. French, New York.—p. 1061. To be concluded.
93 Field of Various Methods of Cardiac Diagnosis. H. E. B. Pardee, New York.—p. 1065.
94 Postpartum Hemorrhage. H. Thoms, New Haven, Conn.—p. 1069.
95 Importance of Antecedent State of Uneasiness as Cause of Certain Normal and Abnormal Types of Behavior. M. Solomon, Chicago. —p. 1070.
96 Treatment of Syphilis with Arsenobenzol Polyclinic. C. H. J. Barnett, Philadelphia.—p. 1073.
97 Case of Nasal Sarcoma Cured by Radium. O. J. Stein, Chicago. —p. 1075.
98 Postbellum Medical Problems; Conservation of Race. J. H. Marcus, Atlantic City, N. J.—p. 1076.
99 Ophthalmologist and General Practitioner. M. J. Levitt, New York.—p. 1078.

Northwest Medicine, Seattle

December, 1917, **16**, No. 12

100 What We May Learn from French War Tuberculosis Problem. R. C. Matson, Portland, Ore.—p. 355.
101 Diagnosis of Tuberculosis. H. W. Hoaglund, Colorado Springs, Colo.—p. 361.
102 Tuberculosis in Children. G. H. Cattermole, Boulder, Colo.— —p. 362.
103 Complement Fixation Test for Tuberculosis. C. L. Shields, Salt Lake City.—p. 364.
104 Treatment of Tuberculosis. W. H. Swan, Colorado Springs.— p. 365.
105 *Gastric and Duodenal Ulcers; Results from Combined Medical and Surgical Treatment. G. G. Richards, Salt Lake City.—p. 368.
106 Spontaneous Obliteration of Cavity External to Stomach and Communicating with it Through Perforated Ulcer. J. E. Else, Portland, Ore.—p. 370.
107 Recent Additions to Knowledge of Poliomyelitis. E. A. Rich, Tacoma.—p. 372.
108 Importance of Proper Food in Prevention and Treatment of Insanity. J. W. Givens, Orofino, Idaho.—p. 374.
109 Case of Asthma Relieved by Normal Horse Serum. R. W. Stearns, Medford, Ore.—p. 376.
110 Salvarsan Clamp Needle Holder. J. B. McNerthney, Tacoma.— p. 377.

105. **Combined Treatment of Gastric and Duodenal Ulcers.** —The medical treatment adopted by Richards consisted of the control of the free acid and pain by alkalis and in many cases belladonna and a long course of dieting. Of the medically treated patients, 25 per cent. later showed some return of their former trouble and still have to remain on a careful diet; 25 per cent. are apparently cured at the present time; 50 per cent. were only temporarily if at all improved, and 40 per cent. of these returned later for operation. The mortality of the medical treatment was nil. The surgical treatment consisted of a posterior gastro-enterostomy in all cases except seven perforated ones. One rather alarming complication following operation was the development of pneumonia in 12 per cent. and of pleurisy alone in 4 per cent. The average time that all patients remained on a prescribed diet and medicine following the operation was three months. Five per cent. have had some return of symptoms and have had to resume restricted diet for short periods. Two patients report no improvement in symptoms after one year. Eighty-five per cent. of the patients report very satisfactory results from the combined surgical and medical treatment. Two of the patients on whom operation was performed died, one six months after operation, of pernicious anemia. The other died of a double lobar pneumonia four days after operation for a perforation of thirty hours' standing. Richards emphasizes particularly that there has been gross neglect on the part of surgeons doing stomach work in the matter of postoperative treatment. A gastro-enterostomy does not cure an ulcer, either gastric or duodenal. It is merely a means to that end. If a careful regulation of the diet and a control of the acids will cure a large percentage of ulcers without operation, certainly these measures will act as valuable adjuncts to the benefits derived from the operation, and probably hasten a cure.

Ohio State Medical Journal, Columbus

December, 1917, **13**, No. 12

111 Malignant Goiter. A. Crotti, Columbus.—p. 807.
112 Application of Military Surgery to Civil Practice. W. E. Lower. —p. 810.
113 Diseases of Nasal Accessory Sinuses. J. W. Murphy, Cincinnati. —p. 812.
114 Care of Eyes of Schoolchildren. S. H. Monson, Cleveland.—p. 813.
115 General Therapeutic Management. R. Southworth, Cincinnati. —p. 817.

Oklahoma State Medical Association Journal, Muskogee

December, 1917, **10**, No. 12

116 Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis. L. J. Moorman, Oklahoma City.—p. 455.
117 Pregnancy among Tuberculous. W. A. Fowler, Oklahoma City. —p. 458.
118 Tuberculosis in Oklahoma. J. Schevitz, Oklahoma City.—p. 461.
119 Early Recognition of Pulmonary Tuberculosis and Its Economic Value. W. F. Dutton, Tulsa.—p. 467.
120 Clinician and Laboratory. G. A. Lamotte, Oklahoma City.—p. 472.

Rhode Island Medical Journal, Providence

December, 1917, **1**, No. 12

121 Determination of Activity of Pathologic Process; Treatment and Prognosis in Syphilis of Central Nervous System. J. B. Ayer, Boston.—p. 239.
122 Pulmonary Abscess and Gangrene. H. de Wolf, Providence.—p. 243.

Surgery, Gynecology and Obstetrics, Chicago

December, 1917, **25**, No. 6

123 *Gunshot Wounds and Their Treatment. B. Moynihan, Leeds, England.—p. 583.
124 *Injuries to Peripheral Nerves and Their Treatment. B. Moynihan, Leeds, England.—p. 595.
125 *Gunshot Wounds of Lungs and Pleura. B. Moynihan, Leeds, England.—p. 605.
126 *Sodium Persulphate in Treatment of Tetanus; Report of Cases. L. Leyva, Bogota, Columbia.—p. 613.
127 *Study of Rectosigmoid. W. J. Mayo, Rochester, Minn.—p. 616.
128 Postoperative Pulmonary Complications. E. C. Cutler and J. J. Morton, Boston.—p. 621.
129 *Fat Embolism Following Trauma to Bones. G. T. Caldwell and H. L. Huber, Chicago.—p. 650.
130 Case of Serous Meningitis Following Traumatism. C. H. Lemon, Milwaukee, Wis.—p. 663.
131 Diagnosis of Mammary Conditions. W. C. MacCarty and A. C. Broders, Rochester, Minn.—p. 666.
132 Clinicopathologic Nomenclature of Mammary Conditions. W. C. MacCarty and A. C. Broders, Rochester, Minn.—p. 670.
133 Case of External Rupture of Pelvic Hematoma During Instrumental Delivery. T. H. Cherry, New York.—p. 674.
134 *Primary Malignant Neoplasm of Fallopian Tube, Probably Deciduomatous. C. Jacobson and H. G. Wells, Chicago.—p. 675.
135 Case of Giant-Cell Epulis of Upper Jaw. F. Reder, St. Louis.—p. 680.
136 Unilocular Cyst of Prostate Causing Obstructive Symptoms. M. Behrend, Philadelphia.—p. 682.
137 Greater Exposure in Kidney Approach. H. J. Prentiss, Iowa City, Iowa.—p. 685.
138 *Modification of Universal Incision in Exploratory Laparotomy. D. Del Valle, Buenos Aires, Argentine.—p. 688.
139 *Treatment of Double Femoral Aneurysm by Proximal Occlusion with an Autoplastic Fascial Flap. E. G. Jones and C. E. Waits, Atlanta, Ga.—p. 689.
140 Simple and Efficient Method of Suprapubic Bladder Syphonage. N. H. Beal, London, Ont.—p. 692.
141 Splint for Treatment and Transportation of Fractures of Lower Extremities. C. T. Butler, New York.—p. 693.
142 Methylene Blue in Diagnosis of Acute Perforating Gastric and Duodenal Ulcers. H. L. Baker, Chicago.—p. 695.

123. **Treatment of Gunshot Wounds.**—Moynihan says that the excision of all contaminated, infected, or dead parts—the removal of all fragments of clothing and of all projectiles, is the supreme necessity in all cases. In 80 or even 90 per cent. of early cases this may allow of immediate closure of the wound, which will be followed by healing in the great majority of cases. In infected early cases the mechanical exposure and cleansing may be followed by a treatment directed to the removal of the remaining infection. In infected late cases, a thorough mechanical exposure and cleansing of the wound and the parts around will allow of secondary closure forthwith if certain antiseptic pastes are used. Experience shows that similar results have followed on this mechanical treatment of the wound without the introduction of antiseptics. A further trial in this class of cases may show that the natural defenses of the tissues are ample to deal with the infections then remaining. Sufficient reliance does not appear to be placed on the stupendous power the body tissues possess for controlling infection. Emphasis is laid by Moynihan on the paramount necessity for the complete immobility of wounded parts at all times and on all occasions. So will one of the most powerful agencies making for reinfection and autoinoculation be kept in check.

124. **Injuries to Peripheral Nerves.**—Moynihan insists that the earliest examination should be made of all wounds in which division of a nerve trunk is probable. If at the casualty clearing station such a lesion is found, end-to-end suture should be adopted forthwith. This is more likely to be possible in cases in which primary suture of the wound, after excision, is found practicable. If secondary suture of the wounds, after the Carrel-Dakin method has been practiced, is to be undertaken, the union of divided nerves should be secured at the same time. If these methods have been attempted and have failed, they do not prejudice the later union of the nerve. On the contrary they probably insure that an easier and more satisfactory operation can then be practiced. Throughout the whole period before late nerve suture is attempted, the strictest attention must be paid to the relaxation and nutrition of all paralyzed muscles, to the maintenance of suppleness in all joints moved by these muscles, and to the preservation of the integrity of the skin. Operations on nerve trunks demand the most scrupulous observance of the ritual of asepsis and gentleness of manipulation; the nerve must not be injured by instruments or by the surgeon's finger; it must not be separated from its sheath or disturbed overmuch from its bed; it must not be chilled or allowed to dry. All sutures must be of fine catgut and introduced with most punctilious accuracy. Axial rotation of the nerve must be avoided. The cut ends of the nerve before approximation must show clearly the fibers of which the trunk consists. Nerve grafting is of little or no value; nerve anastomosis is sharply condemned; the turning down of flaps from the nerve to bridge a wide gap is useless. Tendon transplantation is of great value in cases in which nerve suture is impossible or in cases in which suture has given a result not entirely satisfactory.

125. **Gunshot Wounds of Lungs and Pleura.**—The following general conclusions are given by Moynihan: The approximate mortality from gunshot wounds of the chest at all parts of the line of communication is 20 per cent. The causes of death are hemorrhage as a rule within twenty-eight hours; and sepsis after the third or fourth day. The local conditions in wounds of the chest wall and lung are in all respects similar to those met with in wounds elsewhere. The lung tissue is more resistant to attack than many other tissues. The opening of the pleural cavity and the resulting exposure of a large serous sac to infection and all its consequences add, however, a danger of the most threatening character. The chief essential in the treatment of all cases of penetrating wounds of the chest is rest. In clean perforating wounds of the chest, rest together with the cleansing and dressing of the wound of entrance or exit, will lead to the recovery of the great majority of cases. In cases of "open thorax," the earliest and most complete effort possible must be made to secure closure of the wound after an appropriate toilet.

In those rare cases of grave hemorrhage, when hemoptysis is present or when the blood escapes by the wound, a direct access to the source of the bleeding must be obtained, when all contingent circumstances permit, and the wound in the lung must be treated by suture, preferably; or by plugging of the cavity from which the blood escapes. In cases of hemothorax when the blood effused is small in quantity and remains sterile, no active measures are necessary, unless absorption is long delayed. Aspiration, repeated if necessary, may then be performed. In cases of hemothorax, when the blood effused is large in amount and remains sterile, aspiration after the seventh or eighth day, or earlier in cases of urgent dyspnea, certainly hastens convalescence, permits a more rapid expansion of the lung, and prevents the formation of firm adhesions which may permanently cripple the free movements of the lung. In cases of hemothorax, whether the amount of blood is small or large, when infection takes place, open operation is necessary. Early operation both when the Carrel-Dakin technic or Morison method are adopted saves many weeks of convalescence and permits of a more perfect functional recovery. Small foreign bodies, or rifle bullets, imbedded in the lung, often cause no symptoms; they become encapsulated and may safely be left. Larger foreign bodies retained in the lung may cause distressing or disabling symptoms for long periods. In such cases removal after resection or elevation of the fourth rib through an anterior incision will allow of the safe removal of the projectile from any part of the lung. Pieces of metal so removed are almost always infected.

125. **Tetanus Treated by Sodium Persulphate.**—Leyva says that before the introduction of sodium persulphate in the American Hospital in Paris, 75 per cent. of the cases of tetanus ended fatally. In Leyva's work the patients who were treated with sodium persulphate recovered, while the others did not. Persulphate combined with the antitetanic serum relieves the pains and spasmodic attacks. The minimum dose must be 60 c.c. in one day. The solution must be freshly prepared, and must be kept cold and in a shaded place, as both heat and light decompose it.

127. **Study of Rectosigmoid.**—In an investigation of the last 100 specimens of cancer of the rectum and rectosigmoid

removed consecutively at St. Mary's Hospital, Rochester, Minn., it was found that twenty-eight were located in the rectosigmoid juncture, extending as much on the rectal as on the sigmoid side, twenty-one involved the juncture but extended more on the rectal than on the sigmoid side, fourteen involved the juncture but extended more on the sigmoid than on the rectal side. Thus 63 per cent. involved the rectosigmoid, 30 per cent. the rectum only, and 7 per cent. the anal canal.

129. **Fat Embolism, Trauma to Bones.**—Caldwell and Huber report on an experimental study of its production and prevention. They found that crushing the tibias of mature rabbits produces a moderate and fairly constant amount of fat embolism, as determined by counting the fat droplets in a large number of representative microscopic fields, in stained sections of lung tissue. Esmarch constrictors placed on the legs of rabbits, previous to the crushing of the tibias and removed after two hours, lessen distinctly the amount of fat entering the lungs during the remainder of the experimental period; this effect is much less marked and more uncertain when they are removed at the end of a half hour or even one hour. The amount of fat embolism which develops after the removal of the constrictors is dependent largely on the activity of the animals. Rabbits kept in chloral hydrate narcosis during the entire experimental period, following the crushing of the tibias, develop only a small amount of fat embolism although the constrictors are not used. The removal, by means of a motor saw, of splints from the tibias of normal dogs and rabbits produces an appreciable but a very small amount of pulmonary fat embolism. The use of the chisel for the removal of the tibial splints from dogs increases very slightly, if at all, the amount of fat entering the circulation. The spinal part of the Albee bone transplantation operation, on normal rabbits, produces more fat embolism than does the tibial part.

134. **Neoplasm of Fallopian Tube.**—Jacobson and Wells report the case of a woman 20 years old, presenting history, symptoms, and physical findings suggesting an ectopic pregnancy and considered as such without question at the time of operation. Four weeks after the operation the patient died of hemorrhage and sepsis, with a pelvic abscess performing the sigmoid and opening into the vagina, and thrombosis of the iliac and renal veins. On postmortem examination the wall of the pelvic abscess was found to be made up of extremely soft neoplastic tissue of peculiar polymorphous cells, and encapsulated nodules of similar histologic structure were found implanted on the peritoneal surfaces, both parietal and intestinal, and invading the left fallopian tube. There were no metastases in the lymph glands nor in remote organs. The pelvic growth was so much altered by infection that its characteristics had little significance. This tumor resembles the atypical chorio-epitheliomas. On the basis of the clinical history, operative and necropsy findings and histologic structure, the authors consider that in all probability the neoplasm arose in the decidua of an ectopic gestation, although the histologic findings alone are not sufficiently conclusive to prove positively that the tumor is a deciduoma.

138. **Modification of Universal Incision in Exploratory Laparotomy.**—The technic employed by Del Valle is as follows: One inch parallel to the median line, an incision is made on the right hand side of the abdomen, commencing two or three finger breadths below the costal margin and extending the same distance above the pubis. On the same line the sheath of the rectus is opened and the muscle retracted outward. In this way it is possible to make an incision on the posterior portion of the rectus sheath, keeping the same distance from the median line. It is at this step that the modification of the incision occurs. The posterior wall of the rectus sheath is opened with two subincisions which leave between them an aponeurotic bridge of an inch or more in width. The inferior incision commences at Douglas' arch and 1 or 2 inches above this arch, the superior incision terminates. In this manner it is possible to explore all the abdomen and pelvis, examine all the viscera, and drain the pelvis.

139. Abstracted in THE JOURNAL, Jan. 20, 1917, p. 221.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

November, 1917, **22**, No. 6

1 Contraction Forms of Human Stomach Illustrated by Plasticine Models. G. Jefferson.—p. 161.
2 Method of Running Coolidge Tube on Continuous Current Mains Without Aid of Accumulators or Other Transforming Device. F. H. Johnson.—p. 174.
3 Roentgen Rays from Sources Other Than Focal Spot in Tubes of Pure Electron Discharge Type. W. D. Coolidge and C. N. Moore.—p. 176.

British Medical Journal, London

Nov. 24, 1917, **2**, No. 2969

4 *Modern Antispetics. A. P. Gould.—p. 677.
5 *Results of Blood Transfusion in War Surgery. L. B. Robertson and C. G. Watson.—p. 679.
6 Direct Transfusion of Blood. A. J. Hull.—p. 683.
7 *Simple and Rapid Method for Selection of Suitable Donors for Transfusion. R. I. Lee.—p. 684.
8 Vincent's Angina Among Troops in France. R. J. C. Bouty.—p. 685.
9 *Six Cases of Tonsillectomy in Diphtheria Carriers. C. C. Ballantyne and B. S. Cornell.—p. 686.
10 Pneumothorax with Hernia into Left Pleural Cavity. T. H. S. Wells.—p. 681.
11 Case of Ectopia Viscerum. P. R. Cooper.—p. 681.

Dec. 1, 1917, **2**, No. 2970

12 Anatomic and Physiologic Principles Underlying Treatment of Injuries to Muscles, Bones and Joints. A. Keith.—p. 711.
13 *Treatment of Neurasthenia and Psychasthenia Following Shell Shock. R. T. Williamson.—p. 713.
14 *Red Blood Cell Count and Hemoglobin Content of Blood in Disordered Action of Heart. A. G. Levy.—p. 715.
15 Acute Tuberculous Bronchopneumonia with Pneumothorax. A. Malloch.—p. 716.
16 Trench Foot. R. T. Dobson.—p. 717.
17 Treatment of Secondary Hemorrhage from Buttock by Ligature of Internal Iliac Artery; Case Reports. W. M. Shepherd.—p. 718.
18 Fragment of Shell in Arterial Circulation; Case Report. C. S. O'Neill.—p. 719.
19 Story of Tooth Plate; Unusual War Injury. G. Taylor.—p. 720.
20 Absence of Right Pinna and Right Tonsil, with Right Facial Paralysis. J. J. Healy.—p. 720.

4. **Modern Antiseptics.**—The Morison antiseptic paste (bipp) treatment of wounds is, in Gould's opinion, the highest attainment yet achieved. Deliberately to sew up a wound known to be gravely infected after a single treatment and trust to sterilization being effected by the enclosed antiseptic is a bold procedure which when successful, as it is in Morison's hand, Gould says well merits the description of "brilliant." The technic is very definite and must be carried out with great care. As in Carrel's method, it is twofold. On the one hand the dead and dying material is most thoroughly removed by vigorous friction. Then a potent antiseptic (bipp) is most carefully applied to every part of the infected surface in sufficient but not excessive quantity. Morison's treatment cannot be summed up in the one word "bipp" any more than Carrel's can in the word "tube." Each method of treatment depends for success on a very careful technic, and it must be carried out in every detail with scrupulous care. The aim of each is the same, the sterilization of the previously infected wound and its closure so as to secure rapid union with the minimum of scar tissue. Carrel proceeds in two stages; first the sterilization, and only after that has been attained does he suture the wound. Morison combines them in one treatment with far less labor and less cost in dressings.

5. **Blood Transfusion in War Surgery.**—Robertson and Watson cite cases to emphasize the fact that many patients admitted in an inoperable condition from severe hemorrhage have been rendered operable by blood transfusion. The largest factor in the causation of the condition of shock as seen in patients admitted to a casualty clearing station appears to be the loss of blood, except in cases of visceral injury. In two cases hemolysis hastened the death of the patient. In one of these the citrate method was used. The possibility of hemolysis certainly is present, but the danger of its occurrence is slight in comparison with the danger of operating on a shocked and exsanguined patient. The results in a series of thirty-six cases of severe primary hemorrhage

may be classified as, life saving, twenty-two; immediately beneficial, but died from infection or operation, nine; no benefit, three, and harmful, two. Although the mortality in this series of cases is comparatively high, it must be remembered that all the patients were in a desperate condition, and with, perhaps, one possible exception, could not have been expected to survive if the procedure had been withheld.

7. **Selection of Suitable Donors for Transfusion.**—Lee describes his procedure as follows: A small amount of blood is collected from a patient (1 c.c. from the ear or finger is sufficient) and allowed to clot. The serum is then obtained. One drop of this serum is placed on a slide and mixed with a drop of a suspension of blood of the donor taken into 1.5 per cent. citrate solution. (A few drops of blood are taken into approximately ten times the amount of 1.5 citrate solution and shaken. It is very important that the blood be dropped directly into the citrate, and should not be coagulated partially.) The result will appear in a few moments, and is best examined under the microscope, where, in the event of a positive test, marked agglutination will be evident. The reaction will also be evident macroscopically. In the event of a negative test it is a wise precaution to raise the coverglass, and after making sure that the serum and cells are well mixed, to examine the preparation again. The only possible source of confusion is the appearance of rouleaux of the red corpuscles, indicating a too thick emulsion. If the test is negative, transfusion may be regarded as entirely safe.

9. **Tonsillectomy in Diphtheria Carriers.**—The authors point out that in apparently normal individuals the *Bacillus diphtheriae* may be harbored in the depths of the tonsillar crypts. Complete enucleation of the tonsils seems to be a successful means for eliminating diphtheria organs from carriers, although it appears too drastic a measure for routine adoption.

13. **Treatment of Neurasthenia Following Shell Shock.**—The important points emphasized by Williamson in the treatment of neurasthenia are: All anxiety and fear of further exposure to similar risks to life, and anxiety from other causes, should be removed, if possible, and the patient should be told definitely that he will certainly recover. The sleep treatment is very useful. At first hypnotic drugs may be given both at night and during the day for a short time; so that the patient may sleep all night and, for a few days, also during part of the day. He should cease thinking of the war and his experiences. This may be brought about (*a*) at first by the sleep during part of the day as well as during the night, as just described, and by occupation whenever he is awake; (*b*) afterward he should be kept asleep all night (by drugs); but during the day the drugs should be discontinued and he should be kept fully occupied in a suitable way. As regards the kind of occupation: (*a*) A new subject or one not associated with war is desirable. (*b*) Very close application to the work in hand is important. (*c*) The occupation should be interesting and one requiring thought.

14. **Blood in Disordered Heart Action.**—The average red cell count of fifteen patients suffering from disordered action of the heart was 5,837,000; the average hemoglobin content was 93.4 per cent. and the average color index 0.8.

Glasgow Medical Journal

November, 1917, **88**, No. 5.

21 Uterine Fibroids; Diagnosis, Complications, Treatment Based on One Hundred and Fifty Cases. W. D. Macfarlane.—p. 257.
22 Work of Unit Scottish Women's Hospitals in France, Serbia and Salonica. A. L. McIlroy.—p. 277.

Indian Medical Gazette, Calcutta

October, 1917, **52**, No. 10

23 *How to Administer Quinin. A. C. MacGilchrist.—p. 345.
24 Collection and Disposal of Human Excreta in Standing Camps on Field Service. C. C. Murison.—p. 346.
25 Colitis in Waziristan and Its Prevention. M. M. Abdulla.—p. 347.
26 Evacuation of Serious Cases in Mountain Warfare. W. H. Thipthorp. —p. 349.
27 *Prophylaxis of Malaria. M. Roche.—p. 349.
28 Sterilization of Water by Chlorin and Hypochlorites. V. Nesfield. —p. 351.
29 Forgotten Pages of Jail History. J. Mulvany.—p. 358.
30 Infantile Biliary Cirrhosis. S. Ganguli.—p. 361.
31 Cholera. V. B. Bennett.—p. 363.
32 Case of Ulcerating Granuloma. G. da Silva.—p. 364.

23. **How to Administer Quinin.**—The best way to administer quinin by the mouth for the treatment of malaria, MacGilchrist says, is to give it thrice daily with or soon after meals at intervals of eight hours. It is a minor matter which salt of quinin is used, as all salts dissolve in the acid contents of the stomach. The sulphate is the cheapest salt; the hydrochlorid and bihydrochlorid are expensive, and, if given in such a way that they may exist in a concentrated condition in an abraded or damaged stomach, are injurious. When a solution of quinin salt enters the intestines, the alkaloid base quinin is precipitated from the solution of the quinin salt. Quinin alkaloid is very insoluble in water but is very soluble in bile. It is, therefore, useful to give a cholagogue, for instance, calomel, before starting quinin treatment. MacGilchrist advocates the use of Warburg's tincture. Besides quinin, this tincture contains two or three cholagogues, and as these cholagogues are purgative, it contains astringents such as opium. The tincture also contains volatile oils which similarly counteract griping. The efficacy of this tincture is largely due to the presence of the cholagogues.

27. **Prophylaxis of Malaria.**—Experience has convinced Roche that one 5-grain fresh tablet of quinin sulphate taken daily at 5 p. m. prevents malarial attacks.

Medical Journal of Australia, Sydney

Oct. 20, 1917, **2**, No. 16

33 Syphilis. T. E. L. Lambert.—p. 325.
34 Nephrotomy for Complete Suppression of Urine in Child. H. I. Holmes.—p. 333.

Practitioner, London

December, 1917, **99**, No. 6

35 Effects of War Bread on Health. R. Hutchison.—p. 501.
36 Vincent's Disease of Mouth and Pharynx. W. H. McKinstry. —p. 507.
37 Recent Work on Diseases of Lungs. A. J. Jex-Blake.—p. 533.
38 Improved Cesarean Section. A. L. Smith.—p. 541.
39 Technic of Cesarean Section. J. C. Jefferson.—p. 562.
40 Internal Form of Acute Hodgkin's Disease. A. Howell.—p. 565.
41 *Association of Neuritis and Myalgia with Subnormal Temperature. S. Kent.—p. 575.
42 Removal of Massive Lipoma from Parotid Region. R. Manwaring-White.—p. 579.

41. **Neuritis and Myalgia with Subnormal Temperature.**—In lumbago, sciatica and all neuritis which is not complicated by or symptomatic of some febrile disease, the temperature always runs a subnormal course. Kent feels that there must be some relationship between cause and effect. Also pain in each of these disorders varies directly with the depression of the mercury, and should this ascend to normal for a brief period, for such period will the subject obtain respite from his sufferings. Kent suggests the following theory: The blood at normal temperature is able to hold in solution certain morbid products of katabolism, including, perhaps, uric acid. There is, however, a point below which these products cannot remain so dissolved, but must be cast out into the tissues, giving rise to a train of symptoms varying according to the region invaded. If this is a correct surmise, there is, on the one hand, a ready explanation why a certain class of drugs, largely employed in these cases, fails to effect a cure, and on the other an obvious hint toward a rational mode of treatment that would, and, as a matter of fact, actually does, achieve the desired effect. The salicylates and the multitudinous derivatives of coal tar all depress the temperature still lower, thereby increasing the difficulty of the blood stream in reabsorbing the morbid precipitates. The rational treatment is the reheating of the blood stream, through the natural physiologic process of digestion by the oxidation of the fat in the food. Kent relies almost entirely on the administration of olive oil, advocating at the same time a liberal supply of bacon, dripping, or butter. He says it is surprising how quickly an improvement takes place, the relief of pain proceeding always *pari passu* with the ascending of the temperature. He cites four cases. Among local applications he prefers the protecting of the affected part with pine wool, and in

neuritis sometimes gets very decided relief from pain by the injection of ether into the course of the nerve at one or more points.

Quarterly Journal of Medicine, Oxford

October, 1917, **11**, No. 41

43 *Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis. W. P. Morgan.—p. 1.
44 Simple Rapid Method of Estimating Filtrate Nitrogen in Small Quantities of Blood and Other Body Fluids. R. Donald.—p. 19.
45 Use of Cholemic Red Cells and Normal Cells in Production of Hemolytic Immune Body in Rabbit. L. S. Dudgeon.—p. 30.
46 Methods of Estimating Vibratory Sensation. J. L. M. Symms. —p. 33.

43. **Pneumothorax in Treatment of Tuberculosis.**—Morgan claims that partial collapse of a tuberculous lung tends to give rest to any consolidated portion, and thereby to reduce autoinoculation. The changes which take place as a result of the absorption of gas tend to reduce the amount of strain in the diseased parts when this strain is compared with that which existed before collapse. A single operation for collapse is therefore likely to be followed by good results. A moderate degree of collapse does not materially interfere with respiration provided it allows sufficient normal tissue to function. Both lungs can be treated at one and the same time. In all cases of aspiration of fluid from the pleural cavity, the fluid removed should be replaced to some extent by gas. This is desirable, in the case of tuberculosis of the lung, in order to give rest to the diseased parts, and, generally, because it prevents the value action of the lung and all that distress which would result from attempts to empty the cavity completely. The apparatus and method usually employed for the operation are seriously defective in many respects, and necessitate the puncture of the lung and leakage of air from it. These defects can be remedied by the use of a slightly more elaborate apparatus.

Sei-I-Kwai Medical Journal, Tokyo

November, 1917, **36**, No. 11

47 Case of Myotonia Atrophica with Muscular Atrophy. K. Yokomori.—p. 107.
48 Experimental Transmission of Kala-Azar to Laboratory Animals. N. Mine.—p. 108.
49 *Sugar Content of Blood in Infantile Beriberi. T. Suzuki.—p. 109.
50 Roentgen-Ray Examination of Normal Stomach of Japanese. Y. Kato and J. Nakamura.—p. 110.

49. **Sugar Content of Blood in Infantile Beriberi.**—The average sugar content of blood in infantile beriberi, according to Suzuki, is 0.0808 per cent. A light grade of hypoglycemia is present in the majority of the cases, quite independently of the type of the disease or its stage. The author also estimated the sugar content of the blood in mothers and found that in the majority it is normal; in two cases a light hyperglycemia was present. The following facts were elicited by animal experiments. The injection of the thymus emulsion has no influence on the sugar content of the blood in rabbits, nor does it affect the sugar content of blood in epinephrin hyperglycemia. A high degree of hypoglycemia is produced in rabbits after the extirpation of both the suprarenal glands. In these rabbits the injection of the thymus emulsion causes the diminution of the sugar content of blood. From these results the author concludes that the probable cause of the hypoglycemia in infantile beriberi is the insufficient function of the suprarenal glands.

Bulletin de l'Académie de Médecine, Paris

Oct. 23, 1917, **78**, No. 41

51 The Necessity for the Bread Card. Gley.—p. 436.
52 *Means to Arrest the Declining Birth Rate. C. Richet, A. Pinard and Others. Conclusion.—p. 441.
53 The Dispensary and Hospital in Connection with the Consulates in French Colonies. Kermorgant.—p. 459.
54 *Every War Wound Without Streptococci Should Be Sutured. G. Gross.—p. 466.

November 6, **78**, No. 43

55 *Local Treatment for Gas Poisoning. Rumpelmayer and Béclère. —p. 500.
56 *The Alleged Dental Stigmata of Syphilis. V. Galippe.—p. 501.
57 Potato Bread. E. Maurel.—p. 542.
58 Vincent's Hypochlorite Powder in Treatment of Wounds. Sauvage. —p. 548.
59 Senile Conditions in the Teeth of Soldiers at the Front. J. C. Demarquette.—p. 553.

52. **Means to Arrest the Declining Birth Rate.**—The Académie after months of discussion adopted a set of resolutions emphasizing the necessity for combating birth control propaganda, the necessity for criminal prosecution of abortionists, with permission for medical and pharmacist organizations, organizations of midwives, of dentists and of herborists to bring suit against persons guilty of acts that bring direct or indirect prejudice to the collective interests of the profession they represent. The stricter suppression of all advertising and publicity bearing on abortion was urged, and the principle advocated that those with few or no children should be taxed to help support the large families. Regular maternities should be established in every province, with secrecy guaranteed when desired. The inviolability of professional secrecy under all conditions was reaffirmed, and the importance of cultivating and teaching hygiene in the widest sense of the word. The instinct for preservation of the species seems to become less potent as the intelligence develops, and hygiene should seek to restore the normal harmony between them. Individual hygiene shows that birth control measures injure the health. Physicians know that in many households these practices entail nervous disturbances and destroy conjugal happiness. The hygiene of pregnancy teaches that induced abortion jeopardizes the woman's life. It was emphasized that individual hygiene seeks out not only the physical causes of disease but also the moral causes, the reasons for voluntary birth control. Natality is a question of hygiene, and as the Académie's mission is to watch over the public health, this includes the moral health as well as the physical health.

54. **Early Suture of War Wounds.**—Gross states that he was one of the first to insist on early suture of war wounds, and his experience has demonstrated that this can be done with confidence where the wound is not infected with the streptococcus. The anaerobes are unable to develop, he reiterates, unless the streptococcus is present. It can be detected only by its cultures, but he declares that when cultures show the presence of the streptococcus, the sutured wound should be opened up at once. Otherwise all properly cleaned out wounds can be sutured without apprehension. The cultures show in five or six hours quite characteristic findings.

55. **Local Treatment of the Gassed.**—Rumpelmayer declares that as the chlorin gas burns the tissues of the air passages, the logical treatment is with intratracheal injection of a soothing medicated oil. This should be done immediately as it not only relieves the pain but wards off complications from the corrosive nature of the poisonous gas.

56. **No Dental Stigmata Peculiar to Syphilis.**—Galippe devotes forty-one pages to demonstrate that physicians have paid too little heed to the works of dentists, and hence when they find peculiar malformations of the teeth in their syphilitic patients they ascribe them to the syphilis. If they had wider experience with teeth they would find that, to date, there is no dental anomaly of shape, size, site or structure which belongs exclusively to inherited syphilis and cannot be found with other inherited taints.

Journal de Médecine de Paris

August, 1917, **36**, No. 8

60 Influence of Experimental Physiology on Our Knowledge of Surgical Affections. A. Satre.—p. 147.
61 The Diet in Diabetes. Nigay.—p. 150. To be continued.

Presse Médicale, Paris

Oct. 25, 1917, **25**, No. 60

62 The Wassermann Reaction in Malaria. S. I. de Jong and A. Martin.—p. 617.
63 The Cardiopulmonary Circulation. G. Colleville.—p. 618.
64 *Alcohol in Trigeminal Neuralgia. J. A. Sicard.—p. 620.

November 15, No. 63

65 *Detection of the Tuberculous in the Army. Léon-Kindberg and A. Delherm.—p. 645.
66 *Treatment of Stomach Disease. L. Meunier.—p. 647.
67 *Paralysis from Disuse. P. Hartenberg.—p. 648.
68 *Treatment of Syphilis of the Eye. A. Poulard.—p. 648.

64. **Injection of Alcohol for Essential Trigeminal Neuralgia.**—Sicard warns to be careful not to let the alcohol get into a

blood vessel. He knows of cases in which the region tributary to the vessel became gangrenous, and sequesters of bone were cast off. The gangrene healed in a few weeks, but it left an ugly scar. If blood drips from the needle, he postpones the injection of the alcohol. It might be possible by waving the tip of the needle to and fro during the entire injection to keep from depositing the alcohol in the injured vessel. In some cases ocular paralysis developed after the injection of alcohol for trigeminal neuralgia, but it always subsided in a few weeks or months. To ward off this complication he leaves the cocain in place for four or five minutes before injecting the alcohol. If the cocain is in contact with the ocular nerves, there will be transient diplopia. If this becomes manifest, he postpones further intervention to some other time. Facial erysipelas has been known to follow the injection of alcohol in persons who have previously had it; the germs were merely slumbering and were roused by the injection.

This alcohol nerve blocking treatment is adapted only for essential neuralgia. If the pain keeps up continuously, or if there is concomitant anesthesia of skin or mucosa, it is not essential neuralgia, nor when the neuralgia comes on abruptly in all the three branches at once, nor when other cranial nerves are involved and there is trismus, hemiatrophy of the tongue, etc. These forms of neuralgia are secondary, and injection of alcohol not only does no good but may aggravate them. Hence it is necessary to have the patient examined by specialists for the nose, ear, eye and teeth, before assuming that a trigeminal neuralgia is of the essential type. Migraine must also be excluded, as also the neuralgia after herpes zoster. The sign that the injection of alcohol has answered its purpose is the resulting immediate anesthesia of the skin and mucosa of the innervated domain. It is accompanied by a sensation of woody hardness and swelling—mere illusions. The more perfect, intense and total the anesthesia for all three branches, the longer the neuralgia will stay cured. He has had the neuralgia recur under these circumstances only in two out of his several hundred cases. In one absolutely unique case, neither the alcohol nor severing the branches at the oval and round foramens cured the neuralgia, and there was purulent infiltration later, compelling enucleation of the eye. No other mishaps have occurred in his experience although in some elderly persons the bone was so friable that he found it difficult to work the needle into and through the proper passage.

65. **Detection of Tuberculosis in Soldiers.**—Kindberg and Delherm analyze their experiences with 1,000 men suspected of tuberculosis. Only 1.5 per cent. proved to have actual tuberculosis. About 113 of the men had some chronic nose or throat trouble. The resulting cough, fever and physical signs at the apex, with blood in the sputum may masquerade as pulmonary tuberculosis. Absolute reliance can be placed, they say, on radioscopic findings showing normal conditions. This testimony outweighs everything that can be learned from percussion and auscultation. Even when the apex region casts more or less of a shadow the man must be screened from different angles, bending over, or increasing the intensity of the rays, before accepting the shadow as a pathologic process. When the shadow persists and no bacilli are found in the sputum some healed process or pleurisy at the apex can be assumed. An incipient tuberculous process at the apex is possible but practically it is exceptional.

They warn that there is no "pretuberculous stage." If the man has neither active tuberculosis or cured tuberculosis, the cause for the symptoms must be sought elsewhere. In examining the sputum, the first on waking is sometimes the only one during the day that contains tubercle bacilli. The Petri dish should be handed the man at this moment, and with strictest precautions, the attendant skilled and strict, with frequent supervision by the physician. The personal conviction that there must be bacilli present is necessary to keep up the persevering search for them, to repeat the tests of provoked expectoration and homogenization. Some men just on the point of being passed as "closed tuberculosis" after two or three negative examinations then gave positive findings. Not much time is wasted by reiterated persevering examinations, while there is the inestimable advantage of certainty.

On the other hand, for fluoroscopy to have its full significance it must be done by the physician in charge of the service along with the roentgenologist. In their service both were combined in one. Sifting out the actually tuberculous men requires a specially organized service with perfect unity between the laboratory, the clinic and the roentgen room. Under ordinary conditions, with sputum from any part of the day, the search for tubercle bacilli loses the greater part of its value for the diagnosis.

Whatever the method of sifting out the tuberculous, the record of the findings should follow the man wherever he goes. In several instances men fell into their hands again later without a trace of anything to show as to their previous examinations. This is bad for the man and bad for the military service. A booklet giving the clinical history at different intervals, etc., would save much duplication of effort and prove a great aid in helping the man to get and keep well.

This article issues from the *centre de triage* in charge of Major Rist who has been recently in this country. His views as to the paramount importance of refusing to accept the presence of tuberculosis unless the sputum and the roentgen findings confirm the clinical suspicion, have been repeatedly mentioned in these columns. The service includes, besides the laboratory and the roentgen room, an isolation barracks where the men found to have active tuberculosis are kept until they leave *pro rata* for places awaiting them in sanatoriums in the home zone. There is also a nose, ear and throat specialist service, and a service for general medicine to decide the fate of those found nontuberculous. Men are sent here from all sections of the army.

66. **Treatment of Stomach Disease.**—Meunier reports the findings in regard to the freezing-point of the stomach content at different periods after a meal. In twenty normal persons, in ten minutes the freezing-point was 0.70; at thirty, 0.52; in one hour, 0.42; in one hour and a half, 0.38 until finally 0.35 was reached. When the figure for the freezing-point kept high as digestion progressed then the subject began to feel pain in his stomach. A large number of patients with various gastric affections but all with tardy pain an hour or an hour and a half after an Ewald test meal showed, instead of the normal 0.35 after this interval, from 0.49 to 0.72. This indicates retention of stomach contents and abnormal concentration of the gastric juice, whatever the cause of the retention may be. The indications are to hasten evacuation and bring the freezing-point back to the figure 0.35 which seems to be the optimum for evacuation of the stomach. He accomplishes this by having the patient sip a fluid that has the freezing-point at 0.35. The fluid dilutes the gastric contents and brings the freezing-point to the optimum 0.35. The fluid can be a solution of any salt that is directly indicated by the clinical picture, but its molecular concentration should be invariably 0.35. He suggests for this a wineglass every ten minutes of a 9 per thousand sodium bicarbonate solution; or 20 per thousand sodium citrate; 10 per thousand sodium sulphate; 5.5 per thousand sodium chlorid; 40 per thousand peptone; 9.35 per thousand hydrochloric acid, or 26.8 per thousand phosphoric acid. These banish the pain while having a therapeutic action in addition, in suitable cases.

67. **Paralysis from Disuse.**—Hartenberg is in charge of an army "neurologic center" and relates that in many instances of functional paralysis the trouble is the result of long inaction, and hence might have been avoided. The nerves in a long disused part suffer, and the cortical motor centers in control of that part grow sluggish too. There being no longer much feeling and no movement in the part, the man neglects it, forgets it. He carries it or drags it as if it were a foreign body, a dead weight, with that air of indifference which has impressed all observers. It is possible that some are more predisposed than others to inertia, just as others develop readily tremor, tics or spasms. All start with a voluntary disuse of the part on account of some painful lesion. Then comes an hour when movement could be resumed but

is neglected. On the management of the case at this hour depends the future of the part. Vigorous interference is necessary here, with disciplinary measures for the rebellious. To temporize is to do irreparable damage. After a few months, recovery is almost impossible. When the phase of inhibition of the cortical centers is reached, a cure is scarcely probable.

68. **Syphilis of the Eye.**—Poulard remarks that treatment of syphilis of the eye is on the same principle as syphilis elsewhere, but it requires extra haste as the eye is such a delicate organ. He also instils into the eye some substitute for neosalvarsan in case of iritis or keratitis, and has even injected the fluid under the cornea in very grave cases.

Progrès Médical, Paris

Oct. 20, 1917, **32,** No. 42

69 *Cyst in Thyroid Following Bullet Wound. M. Baller.—p. 347.
70 *Healing Over of War Wounds. H. Vignes.—p. 348.
71 Case of Galloping Phthisis After Inhalation of Asphyxiating Gases. J. Tapie.—p. 349.

October 27, **32,** No. 43

72 *Neuroses, Psychoneuroses and Hysteria. Bernheim.—p. 355.
73 The Emotional Factor and Waking Nightmares in the Psychoneuroses of War. G. L. Duprat.—p. 357.
74 *Functioning of an Army Psychiatry Clinic. H. Damaye.—p. 362; J. Crinon.—p. 364.

69. **Bullet in Thyroid.**—The man applied for relief from a tumor in the thyroid which proved to be a cyst developing from the irritation kept up by a bullet in the thyroid. The presence of the bullet had not been suspected during the seven months since the war wound, testifying to the great tolerance of the thyroid.

70. **Healing Over of War Wounds.**—Various means for hastening epidermization of war wounds are discussed by Vignes. Hot paraffin applied with an atomizer seems to have a direct action in this line, besides its protecting effect. He cites Wederhake's report in the *Münchener medizinische Wochenschrift,* June 12, 1917, of the almost constant success he has had with lotions of aluminum acetate supplemented by lymphorrhea induced by Bier's technic. This prepares the field for grafting. He uses for the grafts hernial sacs with the endothelial surface facing outward. Disappointments are frequent with any kind of grafts from another person, while autografts can almost always be relied on.

72. **Psychoneuroses and Hysteria.**—Bernheim defines neuroses, psychoneuroses and hysteria, and shows the connection between them. Every organ, every function tributary to the nervous system, is subject to neuroses. Even the brain is not exempt; hallucinations, amnesia, strange ideas and dreams are manifestations of psychic neuroses. All the symptoms soon subside, perhaps instantaneously, like the disturbances induced by suggestion; the latter are only experimental neuroses. The neurosis may be brought on by emotional stress or it may accompany some traumatic affection or it may be of mental origin—the idea of coughing starts one to coughing. Psychic neuroses are those manifested by mental symptoms, while a psychoneurosis is a nervous affection maintained by the mind. The two may be associated.

74. **Psychiatry in the Army.**—Damaye analyzes 638 cases of mental or nervous affections that passed through his service last year. The mental disturbances were usually transient when the men were kept back from the front. The proportion of the persisting and incurable cases is surprisingly small in comparison to the more or less prompt recovery of the others. The mixed cases are especially numerous, namely, those in an intermediate stage between mental debility and dementia praecox, with and without delirium, or between hebephrenia and actual loss of mental balance. Hystero-epilepsy and hysteroneurasthenia were particularly frequent. The various types of mental anomalies are listed; the largest group was 71 cases of melancholia with notions of persecution; 39 cases of melancholia with a neurastheniform state; 51 of acute brief attacks of delirious excitement with hallucinations, and 37 of simple mental debility. In 24 cases there was desire to commit suicide; in 19 malaria was commencing, and in 399 there was slight albuminuria, with more or less perfect compensation of some heart defect. The albuminuria disappeared in most of them after a week of rest, but in others it persisted unmodified. The etiology of these nervous and mental disturbances is complex: predisposition, emotions, intoxications and fatigue all cooperating. The attacks of convulsions nearly always coincided with exhausting fatigue. Syphilis is a predisposing factor in the mental disturbances, and a combination of malaria and alcoholism, but all the mental and neuropathic troubles and even the syndrome of general paralysis can be started by some concussion mishap. This "presses the button" as it were. Treatment in all cases was to give at once a bath at 37 C. for one-half hour if the man is tranquil, and for an hour at 40 C. if he is excited. A calomel purge was then given and the man was put to bed. The baths are repeated daily and no food but milk is allowed for two or three days. If the urine findings are negative, he is then given the restricted and then the full milk-vegetable diet. By this means the effects of the digestive disturbances, etc., are overcome. No wine is ever allowed; milk or "glyzin" are the only beverages given. The patients are all given, besides, a solution of 40 drops of tincture of iodin in 100 gm. gum mixture, fractioned, during the day. This is kept up for five to ten days. It serves to sterilize the digestive tract, promote leukocytosis, and acts as a general tonic. Cold baths are not advisable, but, if conditions call for it, a daily injection of 5 cg. of sodium cacodylate is given. When there is much mental distress, morphin is the resource and the much excited patients are given, beside the baths, 4 gm. of chloral in 120 gm. of gum mixture at night and possibly a very cautious injection of hyoscin hydrobromate. The most practical arrangement for the psychiatric service is to have an advanced station, moving with the front lines, and, farther back, where all is quiet, a psychiatric center and a neurologic center to which the men can be evacuated from the advanced station. The evacuations should always be in charge of specialist attendants.

74. **The Advanced Psychiatric Centers.**—Crinon urges the importance of recording on the wounded man's card, from the very first, the notice of nervous or mental upset. Psychic changes should be recorded as scrupulously as the organic. It is now officially ordered that the concussion syndrome has to be specified on the card. The "psychically disabled" should have their record as complete from the first as is the rule for the physically maimed. This would permit also suitable measures from the very first, when they are much more likely to prove effectual. The influence on the brain of physiologic disturbances from shell shock or toxi-infections should be arrested as early as possible. To neglect this allows the psychic changes to deepen and crystallize into delirium or confusional states. All this requires advanced psychiatric stations. Their existence is still further justified by the important task of sifting out the men to be sent to the nerve centers and the psychiatry centers farther back from the front. Many men only lightly affected could do well in them and be promptly restored to full duty. Sent back into the interior, their psychic disturbances become more and more confirmed and durable. At the best, the men are returned after months of convalescence when, if they had been given specialist treatment close to the front, they would have been in the ranks again in much less than a month. Toxic delirium of alcoholic origin is often mistaken for a more permanent trouble. It requires only a special course of internment and treatment which is as available in a well equipped advanced psychiatric station as elsewhere. Men subject to convulsions can also be kept under observation here, and the nature and number of their attacks determined. Crinon thinks it is as absurd to exempt men from service on account of a single epileptic seizure—which is now the regulation—as to exempt those who have not good teeth.

Revue Médicale de la Suisse Romande, Geneva

September, 1917, **37,** No. 9

75 *Return of Goiter After Operation. A. Sarkissiantz.—p. 525.
76 *Hernia in Children. J. Brossy.—p. 548. Commenced in No. 8, p. 473.
77 Anthropometric Photographic Control of Children's Growth. L. Jeanneret and G. Messerli.—p. 570.
78 Chronic Hygroma of Iliopectineal Bursa. E. Kummer and de Senarclens.—p. 574.

75. **Return of Goiter after Operation.**—This work from Roux's clinic supplies a foundation for discussion as to the ultimate results of ligatures in colloidal goiters with nodules. It shows that even after ligation of the main trunk of the superior thyroid artery, the anastomoses are enough to ensure sufficient vitality for the remainder of the thyroid, and even after ligation of the four thyroid arteries. Hence this does not guarantee against pseudorecurrence. The ligation induces abundant production of connective tissue, and there may be a very vascular new growth, difficult to remove if a further operation is attempted. A simple, unilateral complete operation guarantees best against further operative measures if the patient does not mind the scar. Multiple ligatures applied during enucleation seem to predispose to annoying return as these recurrences generally take the form of a conglomerate of cysts. The details of seven cases are given in which the goiter returned and a second operation was required. The intervals ranged from three to twenty years. One boy of 10 had ten nodules excised from the thyroid body after ligation of three arteries. In a few months there was a tendency to suffocation from recurring nodules and two were resected; one was as big as a hen's egg. They had developed in the region where the artery had not been ligated.

76. **Herniotomy in Children.**—Brossy analyzes the findings in 236 children up to nine years after an operation for inguinal hernia. The total number, 1887 to 1906, was 333 inguinal hernias in 299 children. The hernia returned in 6.44 per cent., which is less than half the average frequency of recurrence in adults. There has been no recurrence in any of the nineteen operative cases of umbilical hernia. The details of the nine fatalities are given as also of the few cases of recurrence. They warn that children should not be hospitalized for any purpose unless absolutely necessary; when this is the case the child must be isolated completely and no operation should be attempted unless a predisposition to sudden death can be excluded (spasmophilia, status thymicolymphaticus, etc.) Operations for hernia are simpler and the remote results better in children than in adults. The tendency to recurrence seems to increase with the age of the child at the time of the operation.

Gazzetta degli Ospedali e delle Cliniche, Milan

Oct. 14, 1917, **38**, No. 82

79 *Examination of Stools in the Typhoid Group. G. Baglioni.—p. 1099.

October 18, **38**, No. 83

80 Anaphylaxis and Idiosyncrasy. Andruetto.—p. 1114.

79. **Examination of Stools in Typhoid.**—Baglioni has sometimes found the paratyphoid B early in the stools of patients with true typhoid or paratyphoid A bacilli in the blood. It is probably a saprophyte in these cases.

Pediatria, Naples

November, 1917, **25**, No. 11

81 *Chlorin in Blood of New-Born. S. Cannata.—p. 641.
82 *Prizes Given at Infant Welfare Stations. E. V. Palmegiani.—p. 643.
83 A Case of Achondroplasia. S. de Stefano.—p. 655.
84 Vaccine Therapy for Children. P. Ceppellini.—p. 661. Commenced in No. 9, p. 533.

81. **Chlorids in the Blood of the Newly Born.**—Cannata found from 0.392 to 0.434 per cent. sodium chlorid in the blood during the first twenty-four hours after birth, and from this up to 0.460 within the first five days. These figures were obtained from twelve healthy newly born infants.

82. **Practical Infant Welfare Work at Turin.**—Palmegiani describes the workings of what are called the Corredini prizes given to mothers bringing their babies systematically to the baby stations for inspection and advice. The prizes are given monthly and consist of one or more articles of infant clothing, all new, donated by friends of the movement to reduce infant mortality. The mother must have brought the child to the station at least three times in the previous month, and present evidence that she has fed it properly either with breast milk or according to the advice of the station officials. No prizes are given to wetnurses or to mothers who do not begin to bring their infants until they are 4 months old or later. The number of articles thus distributed was 1,014 in 1915. The children came from homes of one or two rooms and in 71.7 per cent. there were from one to three persons to the room. The monthly prizes seemed to have a decided influence in stimulating the mothers to take better care of the children, keep them cleaner and take more pride in their physical development, while another important advantage was that the infants got suitable clothing.

Policlinico, Rome

Oct. 28, 1917, **24**, No. 44

85 *Compound War Fracture of the Femur. P. d'Alessandria.—p. 1305.
86 Sudden Ataxia with Ophthalmoplegia in Child After Measles; Recovery. G. Morelli.—p. 1311.
87 *Acute Nephritis with Spirochetes in the Urine. P. Sisto.—p. 1314.

85. **Fracture of the Femur.**—The importance of early radical measures and immobilization is emphasized, and the plea is made that these wounds should be classed with those that are unable to stand transportation.

87. **Acute Nephritis with Spirochetes in the Urine.**—The spirochete seemed to be of the infectious jaundice type, but there were no symptoms aside from the acute nephritis. The man may have been a carrier.

Riforma Medica, Naples

Oct. 27, 1917, **33**, No. 43

88 *The Clinical Picture of Diseases from Filtrable or Ultramicroscopic Germs. U. Gabbi.—p. 1013.
89 Case of Filariosis Elephantiasis in Sicily. G. Spagnolio.—p. 1017.
90 Present Status of Cerebral Topography. A. Ferrannini.—p. 1024.

88. **Diseases from Filtrable or Ultramicroscopic Virus.**—Gabbi classifies in a table the five groups of these diseases: *a*, dengue with its rash, *b*, the three eruptive fevers, *c*, the four types with petechiae, *d*, the two with hemorrhages in the mucosa of the digestive tract (yellow fever, black vomit), and *e*, poliomyelitis. The latter is the only one without appreciable manifestations in the skin. He emphasizes the resemblances between the various groups, the lack of endocarditis and the rarity of nephritis (except in scarlet fever, and here the primary angina may be responsible). Another feature in common is the fever curve; in all there seems to be an abortive crisis at about a third of the total course. It seems to be connected with the appearance of the eruption, and to be proportional to the extent of skin involved. The dilatation of the vessels in the eruption seems to provide a means for dispersion of heat, and the fever drops proportionately. Leukopeny is the rule in all groups, at least during the first period, and in all there are pains in the lumbar region and limbs at the beginning, and the depression is so great that it suggests involvement early of the suprarenals. All the groups seem to leave a durable immunity, and the spleen is not enlarged or very slightly. The liver is involved in yellow fever alone. No characteristic anatomic lesions are left. In short, he adds, each family of germs has a characteristic set of symptoms, and study of these may enable us to classify better diseases of still dubious etiology.

Brazil-Medico, Rio de Janeiro

Oct. 6, 1917, **31**, No. 40

91 Presence of Balantidium in the Horse. A. M. da Cunha.—p. 337.
92 *Primary Tuberculosis of the Spleen. A. A. de A. Sodré.—p. 337.
93 Present Status of Abortive Treatment of Syphilis. D. Speroni.—p. 341. Conclusion.

October 13, **31**, No. 41

94 *Embolism After Mercurial Treatment. E. von Bassewitz.—p. 345.
95 Rectal Treatment of Malaria in Young Children. A. Pedro.—p. 348.

92. **Primary Tuberculosis of the Spleen.**—The man of 44 developed insidious primary tuberculosis of the spleen which caused only vague symptoms. Finally an abscess formed and ruptured into the pleura, followed by rapidly fatal acute miliary tuberculosis.

94. **Embolism from Mercurial Treatment.**—Von Bassewitz prefers the insoluble mercurial salts in treatment of syphilis, and in the course of his twenty years' use of them he has occasionally encountered symptoms suggesting minimal pleuropulmonary embolism. The symptoms were sudden severe pains in the chest a few hours after an injection of

the insoluble salt of mercury. There was seldom cough or cyanosis, but the temperature usually ran up, and there was tachycardia. Sometimes the seat of the pains changed about, the patients saying they felt as if some foreign body had changed its position. The whole subsided in the course of two or three days without leaving a trace. He attributes these disturbances exclusively to the vehicle in which the drug is suspended and not to the drug itself. All that is necessary to avoid them is to give the drug in olive oil or, better yet, in human fat obtained at aseptic operations from noninfected persons. This is ideal in every respect except that it cannot be kept long. Five typical cases are described in detail.

Repertorio de Medicina y Cirugia, Bogota

October, 1917, **9**, No. 1

96 *Esophagoscopy and Tracheobronchoscopy. A. Forero.—p. 2.
97 *Roentgen Diagnosis of Bone Disease. P. M. Lund.—p. 44.

96. **Direct Esophagoscopy and Bronchoscopy.**—Forero gives the history of endoscopy and the preferable technic, remarking that general anesthesia is indispensable for children, as they are restless and cannot stand cocain, also for timid adults and in all cases in which the foreign body has induced an inflammatory reaction. Otherwise he prefers cocain alone. The loss of flexibility in the spine with advanced age renders endoscopy much more difficult, although not contraindicating it absolutely, but cachexia is an absolute contraindication, and extreme caution is indispensable with heart disease, aneurysm, pulmonary tuberculosis, emphysema, etc., and also extreme nervousness not moderated with sedatives. With cancer of the esophagus there is often spasmodic constriction above. He deplores that with foreign bodies in the air passages and esophagus there is usually so much delay before applying to the endoscopist that the difficulty of detecting and removing the foreign body is much enhanced by the resulting inflammatory reaction. The article is illustrated.

97. **Roentgen Examination of Bone Lesions.**—Lund emphasizes the advantages of taking a radiogram of the sound mate, also, as he discusses the various types of bone lesions and interpretation of the roentgen findings.

Semana Medica, Buenos Aires

Oct. 4, 1917, **24**, No. 40

98 Present Status of Treatment of Rabies. C. R. Mejia.—p. 381.
99 *Reflex Cough from Foreign Body in Ear. J. de la Cruz Correa. p. 384.
100 Roentgen Examination of the Digestive Apparatus. E. Fynn.—p. 385.

99. **Reflex Cough.**—Correa reports several cases in children and adults in which a spasmodic cough was traced to some lesion or foreign body in the ear. One patient was a woman of 52 who had long had chronic eczema of the ears. At every acute exacerbation she had a spasmodic cough. In one young man extraction of the hardened cerumen cured his deafness and his cough. In one boy of 4 the spasmodic cough came on every time his ears were washed in cold water, and an unsuspected shoe button was found in one ear.

Siglo Medico, Madrid

Oct. 20, 1917, **64**, No. 3332

101 *The Roentgen Rays in Diagnosis of Pulmonary Tuberculosis. B. N. Canovas.—p. 786.
102 Medical Precepts and Prejudices in Regard to Food. S. Baglioni. —p. 791. To be continued.
103 Influence of Alkaline Medication on the Elimination of Chlorids. F. F. Martinez.—p. 794. Conclusion.

October 27, **64**, No. 3333

104 Treatment of Atrophy of the Femoral Quadriceps. S. G. Hurtado. —p. 806.
105 *Typhus at Madrid in 1916. G. Marañon.—p. 808. Commenced in No. 3331, p. 766.

101. **Roentgenoscopy with Pulmonary Tuberculosis.**—Canovas emphasizes the importance of being familiar with the roentgen findings in normal lungs in order to appreciate the deviations in the tuberculous lung.

105. **Typhus at Madrid.**—Marañon relates that the mortality with typhus at Madrid in the last twelve years has ranged from 10 to 15 per cent. but in the epidemics of 1913 and 1916 it was 17 and 18 per cent. In children under 10 the disease ran a very mild course; between 10 and 40 it was grave, and after 50, fully 60 per cent. died. Residence in a locality where typhus has been endemic seems to confer a kind of immunity. The intensity and extent of the exanthem are no criteria of the gravity of the case. Cortezo in 1903 stated his belief that the louse was the transmitting agent of the disease. Marañon comments on the difficulty of distinguishing between typhus and epidemic meningitis in certain cases. The former may present the typical symptoms of the latter, while the eruption with meningitis may simulate that of typhus. In one case of apparent typhus, lumbar puncture to relieve the headache showed the meningococcus in pure culture. Herpes speaks also for meningitis. The typhus eruption is not accompanied by the nasopharyngeal lesions of measles. In some cases there may be infarction of lymph glands and salivary glands, suggesting possibly bubonic plague.

In treatment the reliance was on symptomatic measures with free use of camphorated oil in the graver cases. The patients were kept on milk, given with tea or coffee if preferred, with plenty of fruit juices and sweetened water. Ordinary diet could be resumed in two or three days after defervescence. By selecting the attendants and physicians among those who had had typhus, the danger of infection was reduced. They wore overgarments fastened with rubber at neck and wrists, and cotton gloves, frequently changed. The infected rooms were sterilized with sulphuric acid, 50 gm. to the cubic meter, the floors with kerosene, leaving all open to the air and sun for four or five days.

Russkiy Vrach, Petrograd

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106 *Psychotherapy in Chronic Internal Diseases. A. I. Yarotzky.—p. 433.
107 A New Russian Mineral Spring in Treatment of Cholelithiasis. D. A. Burmin.—p. 444. Concluded in No. 29, p. 472.
108 Eruptive Fever in Soldiers, Resembling but Not Typhus. V. R. Russatie.—p. 447. Commenced in No. 24, p. 425.
109 Experiences with Skull and Brain Wounds. V. P. Diedoff.—p. 450. Commenced in No. 24, p. 429.

106. **Psychotherapy in Chronic Internal Diseases.**—Yarotzky pleads for the physician to realize that his connection with a case of chronic internal disease is not restricted to giving the patient directions as to food, drugs, exercise, etc., to enable him to keep up under his chronic disease and postpone the fatal outcome as long as possible. The physician should realize what it means for a man who has lived mainly for the pleasures of the table, for example, to be obliged to restrict himself to the housing and diet necessary with severe chronic kidney disease. He keeps transgressing the doctor's directions, and the doctor gives him up as doomed. Instead of this, Yarotzky pleads that the physician should step in and aid the patient to acquire an entirely new view of life and attitude of mind, live for others, cultivate a love of art and of science, interest himself in his environment, in short, instil idealism, altruism, as a physiologic factor. In his practice he has noticed that persons who develop pneumonia or diabetes have almost invariably passed recently through some severe emotional stress or financial worry.

The fear of death which acts like a whip in acute disease grows dulled in the chronic, and the patient debates whether mere living is worth all the trouble. Here is the field for psychotherapy, as an adjunct to all that medical skill can suggest in the special case. It is indispensable to enable the patient to profit by the physician's skill otherwise. Yarotzky claims that the physician can train the patient's feelings, ideas and ideals, just as he can train an organ to strengthen it. The lack of this sustaining psychotherapy is what drives so many to Eddyism and other fads which make their appeal to the mind. Altruism, idealism, public questions and service, photography and other hobbies—interests of this kind are a potent factor in keeping well and in aiding in the struggle against disease.

Yarotzky takes up in turn chronic disease of the various internal organs, showing the influence of the mind in their course and even on their inception, especially excessive secretion of hydrochloric acid with its evil train. He emphasizes that the physician with his examinations and directions

focusses the patient's attention on some organ and thus by suggestion plus autosuggestion may induce exacerbation of existing derangement. He urges the physician to trust more to his intuitions, explaining how these are the crystallization of a lifetime of subconscious impressions from the environment. The wearing out of organs is merely a subordinate factor in old age. The richness or the poverty of the individual's mental life is the predominant factor. In conclusion, Yarotzky reiterates that the physician is too apt to pay scant attention to the patient's psychic life, and yet this is the key to success for his other measures in some cases.

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

Sept. 29, 1917, **2**, No. 13

110 *Illumination for Fine Handwork. G. G. J. H. Pol.—p. 1120.
111 *The Antagonistic Action of Atropin and Physostigmin. G. den Besten and A. Sluyters.—p. 1137.
112 *Sarcoma of Joint Capsule. E. C. van Rijssel.—p. 1143.
113 *Latent Infection with Gas Gangrene Bacilli. T. van Schelven. —p. 1148.

110. **Illumination for Fine Work.**—Pol writes from the university clinic for eye diseases at Amsterdam to discuss the minimum illumination required for embroidering, working on jewelry and other fine handwork. From the tabulated data it seems evident that a person for a visual acuity of 1 requires a minimum illumination of 40 candle power to read black letters on a white background. If content with a visual acuity of 0.8, then 15 candle power would suffice. With 0.8 and a dark background, 288 or even 578 candle power meters are required to read letters that do not stand out with much contrast. The practical conclusion of the work is that it is impossible to set up a definite standard for minimum illumination, the individual conditions differ so widely. If a minimum is to be selected, the tests described point to 288 candle power meters for vision of 0.8 to 0.5.

111. **Antagonism between Atropin and Physostigmin.**—The conclusions from 225 tests made at the Pharmacology Institute of the University of Utrecht are that a given amount of atropin is able to neutralize the action of physostigmin in the proportions of 1 to 1,500 up to 1 to 1,500,000.

112. **Sarcoma of Ankle Capsule.**—Van Rijssel reports the case of a soldier with a fibrosarcoma of the left ankle. He adds that of the twenty cases on record of malignant tumor in a joint, the ankle was the site of the lesion in only three cases; all the others were in the knee. The prognosis may be regarded as good with a pedunculated growth, although recurrence is not unknown even with these. The outlook is also favorable for the diffuse growths if not too far advanced when removed. Amputation is not required and not even resection of the joint, as a rule, judging from the eighteen operative cases reviewed. As metastasis is exceptional, radical removal of the growth may be tried, with more aggressive measures if conditions later demand them.

113. **Latent Infection with Gas Bacilli.**—Van Schelven writes from the Holland ambulance stationed at Olmütz to describe a series of cases in which a gas phlegmon developed months after a war wound when some operation was done on the region. He also reports a case in which a gas phlegmon at the time of the war wound was conquered by long and deep incisions, the man making a smooth recovery. Six months later he fractured the bone in that leg. It was a simple fracture, but three days later a gas phlegmon developed in that leg. This case shows the possibility of slumbering, latent gas infection, and shows that accidental contamination at the second operation need not be incriminated for these tardy gaseous infectious processes.

Svenska Läkaresällskapets Handlingar, Stockholm

September, 1917, **43**, No. 3. First half of A. Pettersson Festskrift

114 Pettersson's Scientific Work. E. Almquist.—p. 505.
115 More Rapid Technic for Obtaining Antimeningococcus Serum from the Horse. P. Aaser.—p. 514.
116 Modes of Elimination of Mercury. J. Almkvist.—p. 518.
117 Transformation of Pathogenic Bacteria Under Saprophytic Conditions. E. Almquist.—p. 543.
118 Congenital Heart Defects; Two Cases. G. Bergmark.—p. 553.
119 *Mechanical Ileus in the Pregnant and Parturients. E. Bovin. —p. 579.
120 Nature of Heterogenous Antigens. E. Friedberger. —p. 595.
121 *Good Functioning in Much Altered Hip Joints. P. Haglund. —p. 611.
122 Purin Metabolism in a Diabetic of Thirty. E. Hammarsten.—p. 619.
123 *Diabetes Insipidus in a Syphilitic. K. Heden.—p. 625.
124 *Erythrocytosis versus Leukocytosis in Leukemia. I. Hedenius. —p. 631.
125 Tumor in Gasserian Ganglion of Cow. F. Henschen.—p. 649.
126 Trophospongium of Ganglion Cells. E. Holmgren.—p. 664.
127 *Bárány's Syndrome. G. Holmgren.—p. 681.
128 The Alleged Blood-Lymph Glands. G. Häggqvist.—p. 688.
129 Interlobar Empyema; Two Cases. H. C. Jacobæus.—p. 701.
130 Dysentery in Sweden. O. Karlen.—p. 712.
131 *Diphtheria and Diphtheroid Bacilli. C. Kling and M. Ljungdahl. —p. 721.
132 *Bacteriologic Findings in Case of Polymyositis. K. Landsteiner. —p. 759.
133 *Spasmophilia and Milk. K. O. Larsson.—p. 775.

119. **Ileus in Parturients.**—Bovin reviews the literature on the subject of mechanical ileus during pregnancy. The gravid uterus itself is only exceptionally responsible for it. He has been unable to find a case on record developing in the puerperium, but in a quadripara in his own practice a laparotomy was required for volvulus of the cecum the eighth day after normal delivery.

121. **Good Functioning in Pathologic Hip Joint.**—Three young men with nearly or quite normal functioning of the hip joint were found on casual roentgen examination to have changes in the hip joint such as we see usually only with severe deforming arthritis. The remote history in each case indicates that the changes are the sequels of juvenile osteochondritis (Perthes-Calvé disease). The gross anatomic changes develop so gradually and insidiously that function is scarcely interfered with.

123. **Diabetes Insipidus in a Syphilitic.**—The man of 61 had been in the hospital several times for treatment of diabetes insipidus during the last five years, but no benefit was derived until the casual discovery of a positive Wassermann reaction. Marked and permanent improvement then followed under mercury and neosalvarsan.

124. **Erythrocytosis versus Leukocytosis.**—Hedenius relates two instructive case histories which seem to show that the irritation which may induce hypererythrocytosis in one person may induce hyperleukocytosis in another. Both reds and whites may be in abnormally large proportions, as in the first case, and then the reds may drop to a very low figure while the hyperleukocytosis persists unchanged. In the other case the reverse conditions prevailed.

127. **Bárány's Syndrome.**—The woman of 37 suddenly developed vertigo, pain and deafness in the course of mild chronic otitis. There were also rotatory nystagmus and other symptoms forming the syndrome to which Bárány called attention as an indication of pressure in the pons region. They subsided temporarily after four lumbar punctures but returned each time a few weeks later. Finally trephining released a large accumulation of fluid in the unusually long cerebellopontine angle recess, and great improvement followed, confirming Bárány's views.

131. **Diphtheria and Diphtheroid Bacilli.**—The five colored plates sustain the assumption that the pseudodiphtheria or diphtheroid bacilli are not atypical diphtheria bacilli.

132. **Polymyositis.**—Landsteiner found in all the muscles of a woman with polymyositis a kind of streptococcus somewhat virulent for animals.

133. **Spasmophilia and Milk.**—Larsson analyzes the literature on the sources of tetany and spasmophilia, particularly those discussing milk as a factor. He then reports practical experiences with the different elements of milk albumin in feeding children inclined to spasmophilia. The albumin did not seem to have anything to do with this morbid tendency. On the other hand, giving the children the whey alone, freed from all albumin, brought back the symptoms of spasmophilia in children who had apparently thrown it off after milk had been dropped entirely. Considerable research was done to decide whether spasmophilia is not actual anaphylaxis, but the assumption of anaphylaxis was not sustained. Some crystalloid, heat stable element in cow's milk whey seems to be responsible for the spasmophilia.